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ABSTRACT

Outdoor activities are hurt by participants who have no respect for nature and the environment. The poor behavior of these individuals hurts resources while lowered public perceptions are placed on all participants. The aim of this guide is to empower outdoor users to develop ethics in acting to sustain and nurture the natural world. Outdoors ethics education helps develop ethically fit and competent outdoorsmen. The report is designed to make ethics education theory, practice, and research more accessible to outdoors ethics educators. The first three chapters summarize research on ethics and character education, and on behavior. The last three chapters discuss outdoor ethics education and evaluation. Included in the approaches to outdoor ethics education are: public awareness campaigns and codes of ethics; user education courses; interactive methods; Project WILD; use of role models; mentoring; community clubs; and peer teaching. Contains approximately 300 references. Seventeen appendices contain sample questionnaires, sample ethics codes, and ethical dilemmas for discussion. (AIM)

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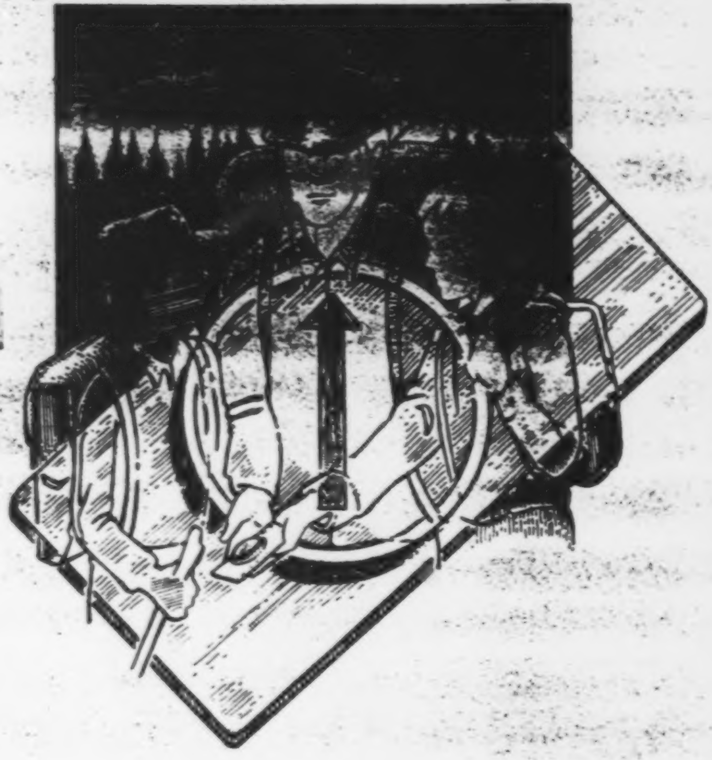

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Teaching and Evaluating Outdoor Ethics Education Programs

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REPORT PREVIEW

Teaching and Evaluating

Outdoor Ethics Education Programs

A Comprehensive Report from the National Wildlife Federation and Cornell University's Department of Natural Resources

Funded by a grant from the U.S. Fish and Wildlife Service

How Do We Improve Poor Outdoor Behavior?

Hunting, fishing, snowmobiling, scuba diving, birding — no outdoor activity can escape the problems of participants who behave badly. Slob behaviors by outdoor users hurt the resource. They cause poor public perceptions of all participants in the activity. They degrade the outdoor experiences sought by others. They denigrate outdoor traditions. Few among us are without a favorite horror story or two illustrating the problem. What can we do about it?

This report is the result of two years of research on what constitutes effective outdoor ethics education. Unfortunately, report findings reveal that many of the traditional methods of teaching ethics are not necessarily effective. For those who are interested in truly accomplishing change, however, this report will present techniques that have a much better chance of bringing about the desired outcomes.

What is Outdoor Ethics Education?

Ethics is a system of guidelines for governing our behavior, guiding and enabling us to know and choose the most right thing to do. Ethics is an internal navigational chart and compass, a means of finding and knowing the best course. Paul Quinnett, in his book *Pavlov's Trout*, says "...ethics is what you do in the dark, before the game warden shows up...." Ethics is driven internally, and is not based on laws, mandates, regulations, or enforcement. Ethics, Quinnett writes "requires only the presence of that still small voice..."

The aim of outdoor ethics education is to empower outdoor users to develop an ethics that values acting to sustain and nurture the natural world, acting responsibly toward the sport or activity in which they are engaged and acting with consideration for other outdoor users. Outdoor ethics education enables users not only to know the most right course but to *act* on it. The development of ethically fit and competent outdoorsmen and women should be the outcome of a good outdoor ethics education program.

But Lots of People Come To Our Classes...

For too long we have tried to measure our success in teaching outdoor ethics by the number of people who come to classes or workshops, or the quantity of brochures passed out at an event. To evaluate outdoor ethics education, we need to look at indicators of behavior change. The research that has been done shows most of the ethics education methods currently in use are not effective.

What Doesn't Work?

Here's what the research says doesn't work:

- lectures
- excessive moralizing
- externally derived codes of ethics and conduct
- adults setting the ethics agenda
- teachers or leaders as authoritarian figures

Other long-practiced strategies that are not effective or cause only short-term changes include using consequences, rewards, and incentives; providing information to develop issue awareness; and using persuasive communications, such as brochures or signs urging good behavior.

What Will Be Most Effective in Teaching Ethics?

It's important to recognize that awareness is not enough to cause long-lasting behavioral change. To change behavior, we must focus on ownership and empowerment. Ownership of an issue is critical to responsible environmental behavior. If we can make it personal and pertinent and help students realize that their actions can make a difference in their world, we have a much better chance of affecting their attitude and behavior.

Today there is an emerging body of research that shows that there are factors that **do** influence behavior change. Some of these include:

- the importance of community — including parents, family, neighborhood and culture, as the context for developing and nurturing ethical behavior
- teachers as guides, not as authoritarian figures
- a positive climate of mutual respect
- group consensus-building and ownership of groups norms, including codes of moral behavior

- the importance of peer teaching, counseling and support
- the importance of responsible service and action strategies in the community

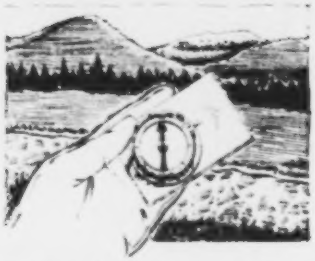
What is abundantly clear is that presenting facts about ethics and responsible behavior is far less important than the social context in which ethics education is done.

An Exciting Challenge!

It is exciting to look at these findings and realize just how much is possible for outdoor ethics education. Outdoor ethics educators are truly in a unique position to do character education. With plenty of opportunities for action involvement in a directly relevant context, ethics education can be accomplished far more easily outdoors than in the abstract confines of a four-walled classroom. People, and especially youngsters, who are interested in hunting, fishing, trapping, snowmobiling, mountain biking and other outdoor activities are highly motivated to learn. They already have a "reason for freezin'." Their motivation is driven by their interest. By using the most effective techniques for ethics education in an outdoor education setting, educators should be quite effective in achieving their outdoor ethics education goals.

What Does This Report Offer?

For the academic who enjoys reading the research findings and delving into the philosophical debates about teaching ethics, there is much information to keep you thinking. For the more practical who want to know how this affects their courses and plans for the future, there are concrete ideas and new strategies. For those who want to evaluate ethics education efforts, read Chapter Five and study the suggestions for evaluation.



How to Use This Report

The authors of this report want you to be able to use its findings to your best benefit. Here are some suggestions to guide you through the information:

- What are you trying to accomplish with your ethics education efforts? (See pages 9-10, 44-45)
- Do you battle problems with public perceptions of hunters, anglers, other outdoor users? (See pages 10, 32-33)
- Is it important to be concerned about teaching ethics? (See page 12)
- Are there lessons to be learned from other models of teaching that attempt to develop character and deal with attitudes and behavior? (See pages 15-18)
- How do you approach teaching ethics? Are courses primarily lecture? Are interactive methods of teaching used? What role do instructors play? (See pages 12-14, 35-41)
- Why is it important to consider community and cultural contexts in teaching ethics? (See pages 16, 27, 54-55)
- Does a universal outdoor ethic exist? (See pages 21-24)
- If students know more, won't they act differently? (See pages 26-27)
- Is a code of ethics going to make outdoor users more responsible? (See pages 33-35)
- Can instructors/teachers be effective role models? (See pages 17, 39-40)
- What's the best way to evaluate what you are doing with ethics education? (See pages 42-53, Appendices C-D)

Report on Teaching and Evaluating Outdoor Ethics Education Programs

Chapter One — What is Ethics Education?
- Why should we be concerned?
- Overview of ethics education in the U.S.
- Importance of social and cultural context
- Character education approaches that work
- List of ineffective approaches
- List of effective approaches

Chapter Two — Whose Ethics Do We Teach?
- Global ethics—values and key points
- Are there universal outdoor ethics?
- A question of hierarchy

Chapter Three — Understanding the Behavior Link
- Human and social causes of behavior
- Awareness doesn't necessarily lead to action
- Ownership and action
- Implications for outdoor ethics education

Chapter Four — Approaches to Outdoor Ethics Education
- Public awareness campaigns and codes of ethics
- User education courses: lectures
- Interactive methods
- Project WILD
- Role models
- Mentoring
- Community clubs
- Peer teaching

Chapter Five — Evaluating Ethics Education Programs
- Objectives of outdoor ethics
- Quantitative vs. qualitative
- Designing an ethics education evaluation
- A hypothetical example of an evaluation
- Evaluating your evaluation

Chapter Six — Summary

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Teaching and Evaluating

Outdoor Ethics Education Programs

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Acknowledgments

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In particular, for the discussions on the finer points of ethics and education, some of which took many hours, we wish to thank Ann Causey, Dr. Clifford Knapp, and Dr. Richard Baer.

In Memory Of...

The late Dr. Robert M. Jackson of the University of Wisconsin-LaCrosse laid much of the pioneering groundwork in outdoor ethics education, primarily through his studies of hunter behavior and his work with hunter ethics education. The degree to which Teaching and Evaluating Outdoor Ethics Education Programs succeeds in advancing the field is due in no small measure to Bob Jackson's life work. Unfortunately, Bob passed on before this project was completed. Though he no longer walks among us, Bob Jackson's influence remains a palpable presence, and an inspiration for all who would effect positive changes in outdoor behavior. Thank you, Bob.

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Preface

For the past 20 years, I have listened to and participated in the ongoing debates about the role ethics play in the behavior of sportspeople. Having worked in education for both the Missouri Department of Conservation and the Pennsylvania Fish and Boat Commission, I realized that this subject was important to natural resource agencies. And I also realized that the subject of outdoor ethics was not in any way resolved as to what worked and didn't work. Everyone agreed it was important, but no one knew what would bring about the results desired—increased awareness, responsible actions and, in some cases, changed behavior.

In 1992, as Director of Outdoor Ethics for the National Wildlife Federation, I took the opportunity to investigate this long-debated topic. First we surveyed the state natural resource agencies to determine if/how they were using ethics in their aquatic or angling education programs. Of the 35 responding, all said angler ethics were a matter of concern. Most taught ethics as part of their education program. Only half, however, thought they were being successful and virtually none had evaluated their efforts. (See survey results in Appendix A.)

With this data in hand, NWF submitted a proposal to the U.S. Fish and Wildlife Service for use of Federal Aid administrative funds to conduct a study on "Teaching Angler Ethics—How-To Techniques and Evaluative Tools." The proposal was accepted and we began our research in 1993.

A special thanks...

Ever so often a stroke of genius hits, and for me it was contacting Bruce Matthews to be the primary researcher and writer for this study. Bruce's qualifications could not have been stronger — he had written extensively on the subject of outdoor ethics in his role as director of the international Coalition for Education in the Outdoors, he was director of the New York Sportfishing and Aquatic Resources Education Program (SAREP) and he had taught outdoor ethics as an instructor at SUNY-Cortland. Furthermore, I knew he really cared about and believed in teaching outdoor ethics.

Bruce has spent countless hours reviewing all the topics that relate to outdoor ethics, talking with other experts who have written on the subject, writing and rewriting and finally, presenting his initial findings to numerous professional groups. Both Bruce and I are grateful for the help we received from the many professionals who recognize the importance of this subject.

We hope you will benefit from reading this report and using it in whatever ways it will help your programs and efforts. The challenge for all of us is to help outdoor users recognize the importance of being responsible to the natural world, the traditions of our various outdoor activities and to others as well as themselves. This report will give you effective ways of doing that. It's an exciting challenge — good luck!

—Cheryl Riley

Introduction

WANTED: Responsible outdoor users. Must understand good outdoor behavior. Must consistently choose to act with regard to the best interests of the natural world whenever possible. Ethical fitness and competence required. Outdoor slobs need not apply.

Los Angeles: California birders crush rare black rail in effort to add bird to life list.
Seattle: Wildlife professionals trample alpine vegetation in Olympic National Park as they attempt to get close-up photo of eight-point blacktail deer in velvet.
Yellowstone National Park: Fight breaks out as wildlife photographers jockey for position to photograph rutting bull elk.
Lansing, Michigan: Television outdoor personality cited for hunting without a license.
Yellowstone National Park: World-record bowhunter arrested for poaching park elk.
Lake Placid, New York: Adirondack vacationers drive off nesting loon pair with constant imitation of loon call.
Pierre, South Dakota: Catch-and-release walleye tournament called off when 85 percent of released fish die.

How can poor outdoor behavior be improved? Hunting, fishing, snowmobiling, scuba diving, off-highway traveling, birding—no outdoor activity can escape the problems of participants who behave badly. Slob behaviors by outdoor users hurt the outdoors. They cause poor public perceptions of all participants in the activity. They degrade the outdoor experiences sought by others. They denigrate outdoor traditions and jeopardize the future of the activity. But what can be done about it?

Responses often include calls for stricter laws, regulations or mandates. More enforcement is frequently mentioned. But these strategies treat the symptoms, not the problem. Education-based responses are gaining momentum, particularly among state and federal resource agencies through their sportsman education, aquatic education and watchable wildlife programs, and with membership organizations such as the Izaak Walton League of America, the American Birding Association and others. The assumption is that those outdoor users educated about appropriate behaviors, who include the natural world in their value systems, will act in a more ethical manner by exhibiting more positive outdoor behaviors.

Clearly, outdoor ethics education is becoming a top priority—we need better behavior from outdoor users and we need it now. All members of the outdoor and environmental education community—hunter educators, wilderness school instructors, the off-highway vehicle industry, natural resource managers, outdoor writers, fishing groups and environmental advocacy organizations—must respond. (Elliot 1992; Jackson & Norton 1979; Marshall 1993; Schmied 1993; Stedman & Enck 1992; Waterman & Waterman 1993a)

But does outdoor ethics education really work? What does the research say? And what ethics do we teach? How do we teach them effectively? How do we measure our success? These critical questions face those responsible for developing outdoor ethics education programs. We must answer these questions honestly, and show evidence that our ethics education efforts are effective. If we don't, we do a disservice not only to those we are attempting to educate, but to our agencies and organizations, and to the environment in which we enjoy our activities and the rich traditions associated with them.

- ***How effective are the outdoor ethics education techniques we now use?***
- ***Do research and educational theory support our methods of ethics education?***
- ***What are the best ways to evaluate ethics education?***

In an effort to begin answering some of these questions, the Outdoor Ethics Division of the National Wildlife Federation (NWF) has prepared this report, with the help of Cornell University and a grant from the U.S. Fish and Wildlife Service. First, state aquatic resource education coordinators were surveyed to identify angler ethics education techniques and methods used to evaluate those techniques. The survey showed many states provide some type of angler ethics programming, and some have written their own curriculum materials, but few states have evaluated the ethics component of their programs. (See Appendices A and B.) This was not surprising, because most states have just begun aquatic education with the support of funds from the Federal Sportfish Restoration Act (Wallop-Breaux) in the last six years. Until now their focus has been more on developing programs and curriculum instead of evaluation. The survey established a clear need for more support for angling ethics education, particularly in identifying effective methods and ways to evaluate.

The literature was reviewed, but little was found on angling ethics. The search was expanded to include hunting ethics, and then outdoor ethics in general. As expected, research has focused primarily on hunting ethics until recently. Today there is increasing concern about ethics in backcountry travel, off-highway vehicle use, and other outdoor activities—and a parallel increase in the amount written about them. Though most of what is being written focuses more on behavioral problems than solutions, a number of techniques and strategies being used to improve outdoor behavior were identified.

Because the same ethics education techniques can be used with any outdoor activity, with the permission of the granting agency, the U.S. Fish and Wildlife Service, the scope of the study was expanded to include not just angling ethics education but all outdoor ethics education.

Few current practices in outdoor ethics education are based on research or critically accepted educational or behavioral theory.

Next the literature in education and the social and behavioral sciences was reviewed to find out about ethics, ethics education, and evaluation. This search showed that educators and social scientists have theories about the development of ethics, but many of these theories remain untested in any substantial way. Research that has been done indicates that we know more about what is not effective than what actually works. Even so, there are encouraging signs that some outdoor ethics education methods now being developed are on the right track.

Finally, current practices in outdoor ethics education were examined. The authors found few that were actually based on research or accepted educational or behavioral theory. Instead, many of the methods are based on existing programs using approaches the research shows to be ineffective. The only two outdoor ethics studies identified that used a research design found no significant correlation between hunter education courses and the behavior of hunters afield. (Bromley et. al. 1989; Jackson and Norton 1979) Clearly outdoor ethics educators need to do a better job of basing their approaches on what research does exist, and on accepted educational theory. This report suggests and in some cases outlines strategies to assist educators with the evaluation that is sorely needed in the field.

How to Use This Report

In this report, the authors attempt to make ethics education theory, practice and research more accessible to outdoor ethics educators. The first three chapters summarize research on ethics and character education, and on behavior and evaluation. Although you can skip these chapters, you are encouraged to read them because they build a background for the last three chapters discussing outdoor ethics education and evaluation. Throughout the report sources are cited within the text; you'll find complete citations listed in the bibliography. You'll also find a number of appendices that present survey results and other detailed material.

Ethics is "obedience to the unenforceable" (Moulton in Kidder 1995)

What Is Ethics?

Ethics is a system of guidelines for governing our behavior, enabling us to know and choose the nearest or most right thing to do. Ethics is an internal navigational chart and compass, a means of finding and knowing the best course.

Ethics is driven internally. Ethical behavior occurs not because of laws, mandates, regulations, or enforcement but through a sense of right. It is "obedience to the unenforceable" (Moulton in Kidder 1995).

Paul Quinnett says in his excellent book *Pavlov's Trout* (1994), "...ethics is what you do in the dark, *before* the game warden shows up...." Quinnett suggests that many people today are governed more by shame than by guilt. "Shame is what you feel when they *catch* you doing something wrong; guilt is what you feel when you do something *you know* is wrong, period. One requires law enforcers. The other requires only the presence of that still small voice...."

Paul Quinnett says "ethics is what you do in the dark, before the game warden shows up, before someone tells you to shape up. Shame is what you feel when they catch you doing something wrong; guilt is what you feel when you do something you know is wrong, period. One requires law enforcers. The other requires only the presence of that still small voice. . . ." (Pavlov's Trout, 1994)

What Is Outdoor Ethics?

Outdoor ethics offer guidelines not only for our behavior toward other humans while in the outdoors, but for our behavior *toward* the outdoors. Outdoor ethics enable us to act in the most responsible manner—toward the natural world, toward the outdoor activity in which we are engaged, toward others, and for ourselves.

Quinnett offers a number of comments on angling ethics, which can apply equally well to most outdoor activities. "Fishing gives the average bloke the perfect occasion to measure his own integrity," he states. "The rules are easily broken, the temptations great, the witnesses few, and the justification for wrongdoing ample. What better circumstance to plumb the depths of one's character? ....An ethical angler needs a game warden like a trout needs a parachute." (1994)

Outdoor ethics enable us to act in the most responsible manner toward the natural world, toward the outdoor activity in which we are engaged, toward others, and for ourselves.

"An ethical angler needs a game warden like a trout needs a parachute." (Pavlov's Trout, 1994)

Outdoor Ethics and Environmental Ethics

Within any strong outdoor ethical framework is a heavy dose of environmental ethics. Both share a responsibility for the well-being of the natural world, but outdoor ethics also includes additional obligations toward people and their activities outdoors.

Environmental ethics asks the degree to which we value nature, and why we do so, as we make choices about how much we change our habitat. Like many other creatures, humans alter their habitat to feed and shelter themselves, and to provide opportunities for breeding and raising young. But unlike other creatures, humans can make conscious choices about the size and the scale of the differences made. As Wendell Berry (1989) suggests, if the choices we make involve too small a difference, we diminish our potential as humans. Too great a difference diminishes nature, and therefore impacts on our future and potentially our survival as a species. As we confront these difficult choices, environmental ethics helps us choose the action most consistent with our environmental values. If we are developing good outdoor behavior based on a strong ethical framework, environmental ethics will be an important part of the picture. (See Appendix 0)

Purpose of Outdoor Ethics Education

The aim of outdoor ethics education is to empower outdoor users to develop an ethics that values acting to sustain and nurture the natural world, acting responsibly toward the sport or activity in which they are engaged and acting with consideration for other outdoor users. Outdoor ethics education enables users to not only know the most right course but to **act** on it.

Outdoor ethics education seeks to develop ethically fit and competent outdoorspeople. According to Paul Quinnett, an ethically competent individual has the "ethical skills and qualities necessary to operate at the highest levels of ethical behavior." He states the skills include "the *sensitivity* to recognize a situation as posing one or more ethical considerations; the *knowledge* of what responses are legal versus what responses might be ethical in that situation; the *willingness* to act; the *judgment* to weigh various considerations where there are no laws or guidelines; and the *humility* to seek consultation and additional knowledge to guide one's action." (1994)

Ethical fitness is a similar concept advanced by Kidder (1995). He defines ethical fitness as "a capacity to recognize the nature of moral challenges and respond with a well-tuned conscience, a lively perception of the difference between right and wrong, and an ability to choose the right and live by it."

Outdoor ethics education empowers learners to extend ethical considerations to the natural world and to develop appropriate guidelines for outdoor behavior. It considers the requirements for a personal code of behavior that includes thoughtfulness toward others and responsibilities toward the natural world—including non-human beings and things that may be impacted by our activity. It also includes a consideration of obligations to the outdoor sport or activity, to the perpetuation of its traditions, and to others who participate in it. When these values come into conflict with each other, outdoor ethics education seeks to enable learners to resolve these conflicts. By helping outdoor users develop their ethics, outdoor ethics education helps them make choices that consistently reflect outcomes based on what they value most.

Successful outdoor ethics education is ultimately measured by behavior of outdoor users.

Successful outdoor ethics education is ultimately measured in terms of the motivation and behavior of outdoor users. Outdoor ethics education should be based not on fear or shame, but on an understanding of what is right and a commitment to doing it because it is right. This applies whether we are educating people to reduce litter, eliminate user conflicts, report poaching, promote catch-and-release fishing, or develop stronger environmental stewardship behaviors. In all cases, we seek an observable change in behavior that is due to internal motivations based on ethics.

Laury Marshall points out another goal of outdoor ethics education: to influence public perceptions more positively toward an outdoor activity such as hunting or off-highway vehicle use (1994). One could argue that this angle is primarily based in self-interest and has little to do with ethics, since public sentiment regarding the recreational use of public lands and resources must support such use if it is to continue. However true this may be for some, a concern for public perceptions also places value on the future, on the outdoor activity, and on others who participate in it. As such, positive changes in public perception may also be considered evidence of success.

The goals of outdoor ethics education, then, are to develop ethically fit and competent outdoorspeople, and to positively influence public perceptions about outdoor users and their activity.

Teaching and Evaluating

Outdoor Ethics Education Programs

1 What Is Ethics Education?

Our need to improve outdoor ethics is ultimately linked to society's yearning for a more ethical, morally defensible life. Outdoor behavior mirrors that of society at large. As we educate about outdoor ethics, we have the opportunity to impact or even to catalyze broader ethical changes in human behavior. So, before focusing specifically on outdoor ethics, it seems appropriate to ground the discussion in the context of ethics in society, and how character education experts view the ethics development process.

Numerous trends among youth point out the need for better character education, including that obtained through outdoor ethics education. According to Dr. James S. Leming, one of the foremost thinkers in character education today, these trends include:

- increases in suicide, homicide, sexual activity, drug and alcohol use, delinquency
- disintegration of the two-parent family and the weakening of the family unit as a transmitter of core values
- growth of psychosocial adjustment problems in youth
- declining academic performance and work habits of youth, putting the nation at risk in terms of the future work force as well as the national fabric
- highly visible national figures frequently providing extremely poor examples for youth

While experts may disagree about the specifics listed by Leming (1993), there is little disagreement that young people can benefit from specific guidance in developing their character and morals.

Why Should We Be Concerned?

Rushworth Kidder uses a poem by William Stafford, "Traveling Through the Dark," to illustrate why developing sound ethical guidelines is so important to society today. In the poem, Stafford describes an ethical dilemma he faced when he found a pregnant doe dead alongside a canyon road. The unborn fawn was still alive. Stafford didn't choose to be confronted by this dilemma, but because he knew about it, he had to deal with it. So he "thought hard for us all" and then pushed the dead doe off the edge into the river (Kidder 1993, 1995; Stafford 1962).

The point is not whether we agree with Stafford's action—he leaves it up to us to decide for ourselves what we might have done in his place. The point is, according to Kidder, that we *know* much more about ethical dilemmas today, and we are impelled to act. We can't duck the issue, we cannot refuse to care. We must find ways to think hard—for us all. Ethical issues, including those in the outdoors, will be resolved because we stop, pay attention, and deal with the situation according to our highest sense of right, not because we wish we had driven down some other canyon road. But it requires an ethically fit and competent individual to do this—and that's why ethics education is so important.

Stafford's Dilemma

Stafford's example of finding a dead doe with a still-alive, unborn fawn offers a good moral dilemma for discussion. What to do? What is the most right action? To what do we owe the greatest responsibility or ethical duty? The doe? The fawn? Deer in general? The environment/ecosystem? Life? Automobile drivers? Personal convenience? What is valued most? Would it make any difference if the doe were an endangered species? If you were a veterinarian? Or a hunter? Why would it matter?

Overview of Ethics Education in the United States

Let's take a brief look at ethics education efforts, both in the past and today. They provide a number of solid clues about how to accomplish outdoor ethics education. We also need to look at studies indicating that some popular methods of teaching ethics are not demonstrably effective in changing behaviors.

Character education is not new—it received much attention in the early 1900s. Those efforts relied on lecturing and moralizing by the teacher or youth leader, who was also supposed to provide a high moral example for children. School clubs conducted activities that helped members practice virtue. Children were encouraged to adhere to morality codes that included the "ten laws of right living." (Leming 1993) Vestiges of this approach remain today in youth organizations such as the Girl and Boy Scouts, which were founded during the time of this early push for character education.

A ground-breaking study in the late 1920s revealed that these methods were ineffective. Hartshorne and May concluded that, "The mere urging of honest behavior by the teacher or the discussion of standards and ideals of honesty, no matter how much such general ideals may be 'emotionalized,' has no necessary relation to conduct." (1928–1930) According to Leming, Hartshorne and May's study "raised serious questions regarding the effectiveness of heavily didactic approaches to character education, questions that contemporary educators should keep in mind." No research done over the intervening years has ever seriously questioned these results (Leming 1978, 1993).

Do those early approaches to character education sound familiar? They should. Even today most outdoor ethics education programs rely on similar methods—lectures, externally applied codes of conduct, the teacher as hero and role model, morality stories and videos—that are as ineffective in the 1990s as they were decades ago. Meanwhile, ethics and character education have explored other approaches.

During the sixties and seventies, moral or values education programs again became popular. Two schools of thought emerged. One approach, popularized by Louis Raths, Sidney Simon and Merrill Harmin came to be known as "values clarification." The second, based on Kohlberg's cognitive development theory of moral reasoning, used a moral dilemma discussion approach. What does the research say about these approaches?

A number of important studies have shown that the values clarification approach is ineffective in changing behavior. In examining the research, Leming (1993) found "a consistent pattern of failure to find significant changes," and a "success rate . . . in the zero percent to twenty percent range." (Bennett 1988; Leming 1981, 1985, 1987; Lockwood 1978; McClelland 1992; Pritchard 1988b) Values clarification advocates themselves admit the research into this method has generally been inconclusive, and values clarification theory as originally conceived is flawed (Kirschenbaum 1977; 1992). Certain values clarification techniques, however, have been used and adapted successfully in the methods we will look at momentarily.

Kohlberg's studies in moral development indicated that individuals progress to more advanced stages of moral development through a well-designed program involving moral reasoning appropriate to the developmental level of the student. Frequent reasoning about moral issues promotes movement into the next stage (Beyer 1976; Blatt and Kohlberg 1975). He also felt that moral development occurred as a function of interaction within a social context between persons functioning at lower levels and a social environment operating at higher stages. Because of this, Kohlberg believed that moral communities should be nurtured to support the moral development of its citizen-members. This has a number of important implications for outdoor ethics educators, as we shall see in Chapter Four (Sichel 1988). For a more detailed consideration of Kohlberg's theory and its critics, see Appendix L.

Research offers some support for the effectiveness of the moral dilemma discussion approach in improving moral reasoning. In Leming's review of the literature (1993), he found that in eighty percent of the studies examined, students improved their moral reasoning after spending at least a semester doing moral dilemma discussions. (Enright et. al. 1983; Lawrence 1980; Leming 1981, 1985, 1983; Lockwood 1978; Schlaefli et. al. 1985; Rest 1979)

Kohlberg's Theory: Stages in Moral Development

Preconventional morality (ego centered)

Stage One
Fear of punishment or getting caught.

Stage Two
Avoidance of punishment still motivates, but risk may be taken if personal benefit outweighs risk.

Conventional morality

Stage Three
Beginnings of social conscience. Actions based on how others view them.

Stage Four
Extends moral allegiance to society. Actions based on upholding social order.

Post-conventional morality: commitment to universal, proposed ethic

Stage Five
Acceptance of individual responsibility for the moral consequences of behavior. Individual chooses action because he/she understands moral reasons underlying choice.

Stage Six
Action motivated by being true to oneself. Personal autonomy. (Blatt & Kohlberg 1975) (See Appendix L for criticisms of Kohlberg's approach.)

These results with moral dilemma approaches seem promising, but three important limiting factors must be noted. First, these positive results occurred during a semester, which is far longer than most outdoor ethics education courses or programs. Second, the growth in moral reasoning, though significant, was small. Finally, and most important, these results indicate changes in levels of reasoning ability, but not in behavior.

Positive results shown by the moral dilemma approach occurred after involvement over a significant length of time, usually at least one semester.

That a causal relationship exists between moral reasoning and moral behavior is claimed by Kohlberg and Candee (1984), but Blasi (1980) found this association to be statistically weak. Leming (1993) suggests that research into the moral dilemma discussion approach thus far offers little support for its effectiveness in changing behavior. Indeed, no studies were found of the moral dilemma approach that looked at its effect on *behavior* (Sichel 1988).

This is not to say that neither values clarification activities nor moral dilemma discussion approaches have a place in outdoor ethics education. As we shall see, it is apparent from the research that the social context in which ethics education is done is far more influential than educational methodology in changing behavior. It is important, however, to understand that current research identifies some very significant limitations with these approaches.

Maximizing the Moral Dilemma Approach

1. Use dilemmas relevant to and within the socio-cultural context of the learner.
2. Use moral dilemmas as a group process.
3. Do dilemmas frequently and regularly.
4. Provide frequent opportunities to put into practice what has been discussed.
5. Provide regular involvement with the moral dilemma discussion approach over a significant period of time.
6. Use moral dilemma discussions as one of an integrated series of strategies, not as a single, stand-alone method.

A note of caution is appropriate at this point. Research to date in the areas of character education, values education and moral reasoning has tended to focus on formal school settings. Baer points out that schools, particularly public or government schools, are typically "thin" moral communities, not "thick" moral communities such as families or churches or long-standing community organizations which are more likely have an impact on moral development (1986; 1994). As we shall see, the setting or context of the moral education plays a critical role in the success of the effort—perhaps more important than the techniques used.

If neither traditional didactic nor more modern moral dilemma and values clarification approaches result in behavioral changes, what other methods can we employ to improve the ethical behavior of outdoor users? Current approaches to character education offer promise.

Character Education As a Model for Ethics Education

"Integrated character education" stresses that knowledge about what is right and wrong is not enough. An individual must be willing to *act* ethically. According to Burnett and Rusnak, this "becomes the integrating component between knowledge and feeling and promotes the growth of character," and it requires "educators to provide those conditions that are conducive to helping students confront problems, propose solutions, and take constructive action." (1993)

...knowledge about what is right and wrong is not enough. An individual must be willing to act ethically.

Burnett and Rusnak cite four criteria for effective character education:

1. ***Responsible action***—needing more than just acquired knowledge about moral and ethical issues. "The curriculum must allow students to confront meaningful questions in the school and community, to propose imaginative solutions, and to become involved in activities and actions to implement those solutions."
2. ***Interaction***—dealing with society's ethical problems in a practical and relevant manner with peers, teachers and the community.
3. ***Integration***— "developing a strong sense of identity, which is the mainspring of moral commitment and action."
4. ***Consistency***—supporting students to act consistently with their values in all settings and situations.

> ***"The integrated character education model focuses on the whole person and pervades a person's total environment. It cannot be achieved with an occasional lesson on ethics or values." (Burnett and Rusnak 1993)***

Strategies for conducting character education include:

- role play and creative drama,
- discussions in which students take opposing viewpoints,
- questioning to promote higher order thinking about values,
- action projects such as community service that involve students, parents, and community in the planning and work,
- recognition for class and individual cooperation and service,
- public visibility for student service efforts.

(Burnett & Rusnak 1993)

Successful Approaches to Character Education

These character education approaches, which outdoor ethics educators can adapt, have the potential to change behaviors:

- *Cooperative Learning Strategies*
- *Community Service/ Social Action Programs*
- *Just-Community Settings*
- *Sex and Drug Education*
- *School Climates*

Current Examples of Character Education

In reading the following descriptions of character education program approaches, think about how they can be used in outdoor ethics education. These connections will be discussed in more detail in Chapter Four.

Cooperative Learning Strategies

Cooperative learning involves small groups of students who set both their personal and the group's learning agenda. They share responsibility for their own learning and for the progress of the group as well. Reviews of the research on cooperative learning show this approach results in more positive social attitudes and behavior, more demonstrated mutual concern, and a higher likelihood to engage in prosocial behavior (Johnson et al 1981; Leming 1993; Slavin 1990).

Social Action/Community Service

Social action and service approaches involve learners in hands-on experiences addressing social or environmental problems and serving the greater good of the community. Leming reports the research evidence of the impact of this approach on student civic responsibility is inconclusive, but he suggests this is due more to the difficulty of controlling variables than to the nature of the service experience (1993).

Environmental education has used a similar approach to investigate science-related social issues, and research evaluating this approach offers some evidence that it does change behavior (Howe & Disinger 1988; Hungerford & Volk 1990).

Just-Community Approach

Derived from problem-solving approaches used by many alternative schools, the just-community approach asks the group to develop the norms by which they will operate. The group confronts relevant issues, discusses them, and reaches consensus-based decisions on the best course of action. Because of the resulting group ownership in these norms, the group sets its own behavioral expectations and enforces compliance through democratically based peer pressure. Research shows that this approach effectively modifies anti-social behavior and brings about compliance with democratically derived group norms (Leming 1993; Power & Reimer 1978).

Sex and Drug Education

Because of the values-laden behavior associated with choices involving drug use and sex, research in the area of sex and drug education may have some implications for other areas of educating for moral behavior. Research shows that:

- lecture approaches are the least effective;
- peer counseling and education approaches are far more effective than lecture; and
- approaches that focus on social influence (helping students understand and deal effectively with the social elements that contribute to drug use) are the most effective (Leming 1993).

School Climate

Schools that create a supportive environment for student involvement in decision-making help their students achieve higher levels of social conduct and moral behavior (Leming 1993). Successful approaches include involving students in peer groups that discuss problems and formulate codes of behavior.

The Importance of Social and Cultural Context

Research shows that effective character education involves learners in setting the ethics agenda, using peer involvement techniques and parental/community support. Felthouse emphasizes the importance of multigenerational interaction, suggesting that the modification of moral behavior occurs on the part of *both* youngsters and adults, thereby benefiting both (1987). A climate of mutual respect among teachers and learners, and among learners themselves, also supports the development of positive moral behavior.

Involve youth, their peers, and parents when setting an ethics agenda.

Effective ethics education is grounded in community. We invite failure if we view the learner as a single entity, disconnected from all other influences except the teacher. We *ensure* failure if we teach ethics without using a community context to illustrate, nurture, and support ethical development. Without grounding ethics within the particular community and cultural context of the learner, ethics remain abstract, outside the scope of experience of the learner, and ultimately irrelevant (Berger & Neuhaus 1977; Hauerwas 1981; Sichel 1988).

Ethics must pertain to the community and cultural background of the learner.

What Doesn't Work?

We know a lot more about what doesn't work than what does. Research clearly indicates one method that does not work to change ethical behavior—the traditional didactic method involving teachers moralizing, lecturing, and imparting knowledge to students. Results are murkier regarding values clarification and moral dilemma discussions, which are also popular approaches. For example, moral dilemma discussions seem to be able to improve moral reasoning, but this improvement does not necessarily translate into improved behavior.

Research also shows that when adults set the ethics agenda, children are less likely to see the agenda as relevant and to change their behavior. If an ethics education program's impact is to be fully realized, it must focus on areas of direct importance to learners (Leming 1993). Students who memorize or imitate moral precepts may mimic ethical behavior, such as catch-and-release fishing, without understanding the reasons for it. Imitation without understanding is not ethics (Ausubel 1968; Stange and Farley).

Ethics education must focus on areas of direct importance to learners. Imitation without understanding is not ethics.

Another common mistake is assuming teachers exert significant influences over their students who are making moral decisions. When high school students were asked who they consulted in decision-making, they reported that friends and parents were almost ten times as important as teachers and school advisors (Schultz 1989).

Summary of Ineffective Approaches

The evidence suggests that these practices and strategies are not effective in bringing about changes in behavior based on ethics:

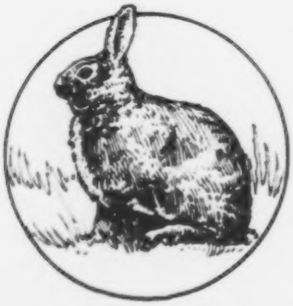
1. lectures
2. excessive moralizing
3. externally derived codes of ethics/conduct
4. adults setting the ethics agenda
5. teachers/leaders as authoritarian figures

What Does Work?

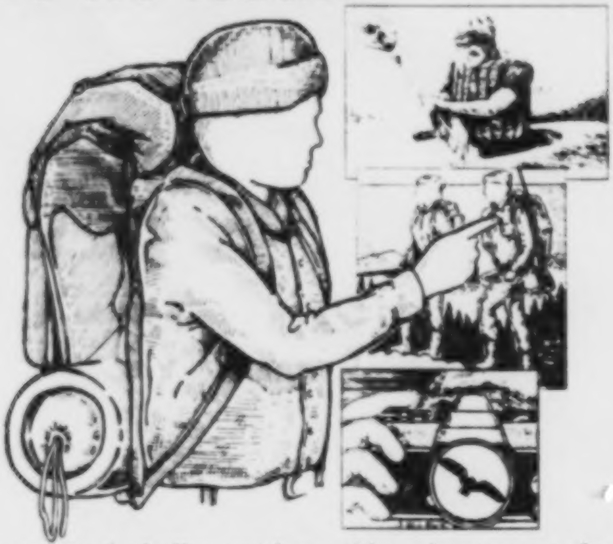
In 1987, when Dr. Robert Jackson searched the literature for guidance from moral educators as he and his colleagues worked to develop more effective hunter ethics education in Wisconsin, he found no consensus among moral educators. Today an emerging body of research shows that the character education strategies described earlier *do* influence behavior. Common threads relevant to outdoor ethics education weave through most of these:

- the importance of community, including parents, family, neighborhood, and of culture as the context for developing and nurturing ethical behavior
- teachers as guides, not as authoritarian figures;
- a positive climate of mutual respect;
- group consensus-building and ownership of group norms, including codes of moral behavior;
- the importance of peer teaching, counseling and support; and
- the importance of responsible action strategies in the community.

It is exciting to look at these findings and realize just how much is possible for outdoor ethics education. Outdoor ethics educators are truly in a unique position to do character education. With plenty of opportunities for action involvement in a directly relevant context, ethics education can be accomplished far more easily outdoors than in the abstract confines of a four-walled classroom. People, and especially youngsters, who are interested in hunting, fishing, trapping, snowmobiling, mountain biking and other outdoor activities are highly motivated to learn. They already have a "reason for freezin';" their motivation is driven by their interest. By bringing the key elements needed for character education to an outdoor education setting, educators should be quite effective in achieving outdoor ethics education goals.



2 Whose Ethics Do We Teach?



Many people, including outdoor ethics educators, profess discomfort when asked to decide whose ethics should be taught. According to Causey (1994), "This question of who decides and how the decisions are made has emerged as a sticking point; few among us presume to be in a position to pass absolute judgment on others, yet it seems we inwardly fear failing the test someone else may propose. . . . None of us wishes to be condemned as unethical because some activity we enjoy and consider to be wholesome and ethical is suddenly proscribed by the 'moral authorities'."

"None of us wishes to be condemned as unethical because some activity we enjoy and consider to be wholesome and ethical is suddenly proscribed by the 'moral authorities'." (Causey 1994)

The question of whose ethics we teach is of particular concern with agency-sponsored education efforts. In taking a leadership role in outdoor ethics education, governmental agencies enter a domain involving morality, and thereby tread in a minefield fraught with peril. Not the least of these hazards is the argument that government itself has no business being involved with morality education in the first place (Baer 1977; 1986).

One response has been to argue that values are personal and the best one can do is help people clarify their own values. This approach begs the question. Usually winding up at the lowest common denominator, it results in an attitude of "seeing what I can get away with" rather than "what is the most right thing to do." The individual, whose previous exposure to values may be based more on Beavis and Butthead than anything else, is left to develop outdoor ethical guidelines that are subjective, narrow, relative, and convenient. This is not a likely scenario for developing the ethical fitness and competence envisioned in Chapter One, a competence which is in the best interests of both society and its government.

Governmental agencies need to develop a policy that establishes a clear distinction between advocacy and education. Ethics education efforts seeking to empower learners, create ownership of ethics problems and issues, and develop ethically fit and competent outdoorspeople can be compatible with government's role in a free society. Rather than advocating for a specific set of behaviors and indoctrinating for a certain viewpoint, ethics education focused on advocating for ethical fitness and competence benefits all. Agency personnel, and the volunteers working with them, must "buy into" the distinction between education and advocacy, understand the finer points in defining the differences, and use vigilance in enforcing a policy separating the two.

Pluralism and Ethnicity in Ethics

In a pluralistic society, educators must include diverse perspectives in their programs. Outdoor ethics educators must also be prepared to manage the inevitable conflicts among value systems that will occur, in the hope that the resolution of these conflicts will reflect the best interests of the natural world. We know that different attitudes and perceptions exist among the different cultures and groups within the United States. Some of these result in different ethics. One example is the difference in ethics between Asian-American and Euro-American anglers regarding the size of fish caught and kept. Another is the difference in ethics between the traditional native American's approach to hunting and that of a trophy hunter primarily focused on antler size. A third is the difference in ethics between urban animal rightists and rural-based or aboriginal trappers.

We do not yet fully understand cultural and ethnic variations in recreation behaviors, attitudes and preferences. Research in this area, though gaining momentum, is still very new. McDonald (1987) suggests four ways to explain the differences:

sociodemographic—differences due to social class
marginality—differences due to under-participation, which occurs because of barriers such as discrimination and poverty
opportunity—differences due to disparity in the availability and accessibility of resources
ethnicity—differences due to cultural leisure values.

While we do not yet fully understand cultural and ethnic differences in outdoor recreation attitudes and behaviors, it is important to realize that they do exist as we address outdoor ethics education.

McDonald believes that any effort to promote an outdoor ethic among non-anglo Americans requires that educators understand "the effects of ethnicity, cultural values and economic status on the access to, and utilization of outdoor resources." This greater understanding and appreciation for cultural differences provides "the basis for the promotion of an international outdoor ethic by, and among, all members of the world community." (1987)

Recognizing differences not only among cultural, religious, ethnic and racial delineations but among subcultures and regions as well, Causey (1994) suggests we find the common ground by

Identifying the personal qualities and characteristics of an ethical angler, hunter or outdoorsperson may be a more effective approach to ethics education than promoting codes, arguing over ethical practices or focusing on the differences among us.

asking "Who is the ethical sportsperson," rather than trying to establish a universal code. Identifying the personal qualities and characteristics of an ethical angler, hunter or outdoorsperson may be a more effective approach to ethics education than promoting codes, arguing over ethical practices or focusing on the differences among us.

Even with a universally accepted outdoor ethic, Causey's focus on the question "Who is the ethical outdoorsperson" is an excellent starting point for outdoor ethics education within any culture.

Global Ethics

Rushworth Kidder, President of the Institute for Global Ethics, recently set out to answer the question "Is there a global code of ethics?"(1993a). He found that people do share a set of global core values, providing the basis for our ethics. These are:

- Love (which some called caring or compassion)
- Truth (honesty or integrity)
- Freedom (liberty)
- Fairness (justice or equality)
- Unity (a sense of community or wholeness)
- Tolerance (respect for diversity)
- Responsibility (accountability)
- Respect for life (avoidance of killing)

The Council for a Parliament of the World's Religions also found common ethical ground when it brought together more than two hundred religious leaders representing more than one hundred of the world's religious faiths in September 1993. The key points were described in *Towards a Global Ethic (An Initial Declaration)* (1993):

- We are interdependent.
- We take individual responsibility for all we do.
- We must treat others as we wish others to treat us.
- We consider humankind our family.
- We must strive for a just social and economic order, in which everyone has an equal chance of reaching his or her full potential.
- We commit ourselves to a culture of respect, justice and peace.
- Earth cannot be changed for the better unless the consciousness of individuals is changed first.

...appropriate, morally justifiable behavior in the outdoors often varies with the location, situation and cultural, religious and social norms...we must provide outdoor ethics education within the social and cultural contexts that will nurture and enforce them.

Do Universal Outdoor Ethics Exist?

Assuming a set of global core values underlies a universal ethics, does a similar set of global core values exist for outdoor users? Outdoor ethics educators face a fundamental problem in answering this question—appropriate, morally justifiable behavior in the outdoors often varies with the location, situation, and cultural, religious and social norms. We see this in conflicts between anglers who practice catch-and-release and those who do not. We see this in regional differences among hunters over the practices of baiting or using dogs. Clearly we must provide outdoor ethics education within the social and cultural contexts that will nurture and enforce them. Are there a set of universal outdoor values to guide us?

Much of the discussion below is in the context of hunting, since that is how it originally appeared. Readers are encouraged not to limit the application of these ideas to hunting, but to place them in a broader outdoor ethics context more applicable to their individual situation.

Fair Chase

The rules of fair chase provide a starting point in our search for universal outdoor ethics (Posewitz 1994). These rules require that the sportsperson gives the quarry every advantage to escape, thereby assuring it is skill that enables the hunter to succeed. George Reiger interprets the rules to include, "hunting without traps or bait, . . . not shooting swimming animals or game hobbled by deep snow, . . . not using artificial light" (1993). The bylaws of Ted Nugent World Bowhunters require members to "Abide by the rules of fair chase, always giving the game the benefit of the doubt, never pursuing while restricted by topography, water, deep snow or constricted by limited fence" (1992).

Although the rules of fair chase provide a useful concept in ethics discussions, their application varies in practice among regions and cultures. They also offer little guidance for the non-hunting, angling, or trapping outdoorsperson.

In his book* Beyond Fair Chase, *Jim Posewitz suggests the following definition of an ethical hunter: "A person who knows and respects the animals hunted, follows the law, and behaves in a way that will satisfy what society expects of him [illegible] her as a hunter" ([illegible]).

Restraint and Duty

Theodore Vitali argues that a universal hunting ethic should emphasize the need for *restraint,* echoing Aldo Leopold's classic definition of an ethic as a "limitation on freedom of action," whether self-imposed or expected by society or culture (Vitali 1992, Leopold 1966). An ethic of restraint applies equally well in all outdoor ethics contexts, but it is more useful if guidelines are included to help us decide how much or how little restraint is appropriate or expected.

To answer these concerns, Vitali lists objects of duty and a proposed ethic for each:

- To animals, we owe a duty to treat them without cruelty
- To each species, we owe a duty to enhance its welfare
- To society, we owe a duty to not offend needlessly
- To our sport or activity, we owe a duty of responsible conduct.

Vitali's guidelines could be even more useful as an ethic with some guidance as to how to decide among these when an apparent conflict occurs. For example, even the most responsible off-highway conduct may offend some segments of society. To which is the greater duty owed?

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Mindfulness, Compassion, and Humility

Causey (1994) suggests that ethical hunters owe a duty to the hunt, the hunter, the non-hunter, and the hunted—and that "these responsibilities impose obligations to be mindful, compassionate, and humble."

- Mindful hunters respect the values of non-hunters, carefully consider the consequences of their actions, and make sure that their knowledge and skill is worthy of the game they seek.
- Compassionate hunters "avoid inflicting any and all unnecessary pain and suffering."
- Humble hunters acquire a knowledge of nature and an understanding of humankind's role as part of—not apart from—the natural world; they also revere and respect the natural world.

In Causey's ethical framework, hunting and fishing "feed the mind, spirit and body, not the ego." She points out, "we are not seeking uniformity of behavior or thought, but rather convergence of values and goals." Her proposed hunting ethics works equally well with any outdoor activity and serves as an excellent basis for guiding behavior in the outdoors.

People do not need to think or act alike, but they must be able to share and communicate their common values and goals in and about the outdoors.

An Outdoor Ethics Hierarchy

Inevitably, two or more ethical duties will compete as we choose appropriate action when faced with a dilemma. Stafford's pregnant dead doe offers one example of such a conflict. Some others may be:

- A hunter observes two bucks traveling together. One has an outstanding trophy rack, while the other is a small spikehorn. On closer examination the hunter determines the spikehorn has been wounded. Which does he/she choose to shoot?
- Justify catch-and-release fishing on ethical grounds.
- Is it really possible to "Leave No Trace?" How do you decide whether or at what level any human impact is justifiable, from an ethical standpoint?

What do you do? What guides any of us when we are confronted with these dilemmas? How do we know what is most right?

In deciding what is *most* right, we need to understand where our values and duties lie. (See Appendix O-Five Environmental Ethical Positions Illustrated.) For some, the answer lies is establishing an ethical framework, a hierarchy that prioritizes values. Thus, if you know which of several values has the greatest importance, then you can choose a course of action that is guided by and consistent with your ethics.

The following outdoor ethics hierarchy is based on that proposed by Jack Lorenz, former executive director of the Izaak Walton League of America:

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1. Our greatest duty is to preserve the natural world that supports and sustains both the outdoor activity and ultimately life itself. From this duty follow our responsibilities to protect and enhance habitat, and individual species.
2. Our next duty is to the sport or activity in which we are engaged, to preserve and protect its traditions, and to act responsibly to bring credit to and public acceptance of the activity.
3. Once these duties are fulfilled, we can consider our own personal needs, values, and desires.

This hierarchy assigns duties to various objects in nature and to our activities, and it helps prioritize these duties. It offers outdoor ethics educators using a hierarchical approach a set of proposed outdoor ethics upon which to build an ethics education program.

A Question of Hierarchy

While some ethics educators may be more comfortable using the hierarchical approach, others recognize its limitations. Values hierarchies are culturally-based and often gender-biased. A ranking or prioritization of moral duties implies that there is always one best answer. If ethical fitness and competence is the goal of ethics educators, room for a number of ethically defensible courses of action must be provided. Through moral reasoning, critical thinking and consistent action, students develop ethical competencies, which may or may not include a hierarchical approach. As Causey (1994b) writes, "morally mature people can and do differ on what to do when there is a perceived conflict of moral duties." Presenting a pre-ordained values hierarchy leaves little room for the development of ethical fitness and competence, and is really no different than imposing a code of ethics. Perhaps the best use of a hierarchy such as outlined above is to present it after the fact, at the end of an ethics discussion. By using it as one possible perspective, additional discussion may be generated. (See Appendix 0)

There may not always be one best answer.

Summary: A Global Set of Outdoor Ethics

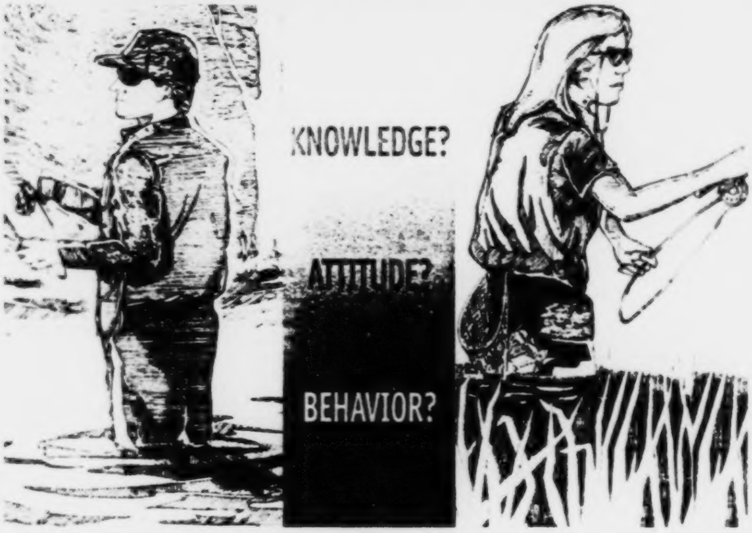
There are some common elements giving rise to a set of outdoor ethics which, if not universal in terms of the relative value attached to each, still contain all the elements needed. These elements may include moral duties to

- the natural world, in total, and to specific ecosystems and habitats
- the animals, both those pursued and all those impacted by our actions
- all living things
- God, the creator, deity
- non-living objects in nature
- other humans, including
  - fellow participants in the same activity
  - other outdoor enthusiasts using the same area for different purposes
  - landowners
- local communities
- administrative or regulatory agencies
- the sport or activity in which we are engaged, its traditions and perpetuation

In our consideration of these duties, a series of keywords emerges, many of which have been discussed above. These include:

- courtesy and consideration
- respect
- responsibility and accountability
- compassion
- integrity
- fairness and justice
- restraint
- humaneness
- selflessness

3 Understanding the Behavior Link


KNOWLEDGE?
ATTITUDE?
BEHAVIOR?

Designing, implementing, and evaluating an outdoor ethics education program that produces ethically fit and competent individuals must be based on an understanding of how to change human behavior. In this chapter, reviews of work done by behavioral and developmental psychologists are presented. Their findings can help us understand the linkages between education and behavior change, and apply them in an outdoor ethics context.

The Knowledge->Attitude->Behavior Change Model

People often assume that changes in behavior can be caused by increasing knowledge and/or by changing attitudes. This knowledge->attitude->behavior change model has driven many aspects of education for some time, including most of the outdoor ethics education programs identified in this research. It makes intuitive sense—knowledge, attitude development, and behavior are definitely related. But their interactions are far more complicated than a simple one-way cause-effect relationship. Research thus far has failed to confirm the validity of the knowledge->attitude->behavior model. (Borden & Schettino 1979; Dwyer et. al. 1993; Gigliotti 1990; Gray et. al. 1985; Hungerford & Volk 1990; Marcinkowski 1989; McRea & Weaver 1984; Sia et. al. 1985/86; Sivek 1989) Outdoor ethics educators should not automatically assume that addressing and evaluating knowledge and/or attitudinal outcomes will, in fact, result in more ethical behavior.

Some theorists and researchers are arguing that, if the desired outcome is behavioral, "attitude research be abandoned in favor of studies that focus on the direct observation of behavior and on behavior change as opposed to attitude change"(Gray et. al. 1985). Outdoor ethics educators could well use more research that focuses directly on behavioral outcomes. Because attitudinal and knowledge (cognitive) outcomes are easier to quantify, they are more likely to be evaluated, even though their links to behavior change are tenuous. Certainly the more quantifiable the result the more likely it will be acceptable to state or federal agencies, even if the result of the evaluation has no clear link to the behavioral outcome desired. This does not make an outdoor ethics educator's evaluation efforts any easier! (See Chapter 5 for more discussion of qualitative and quantitative research, and how they can complement each other.)

Researchers now are re-examining the attitude/behavior connection. They are looking more closely at the operational conditions linking the two and what variables influence the behavior, seeking to identify and include relevant personal and situation variables in a predictive formula. If they succeed, we will be better able to understand if, and predict how, attitudes affect behavior (Gray et. al. 1985).

Does gaining knowledge lead to attitude change? Do attitude changes lead to behavioral change? Not necessarily.

Simply gaining knowledge and developing a pro-environmental attitude does not automatically lead to responsible behavior.

In the meantime, outdoor ethics educators should use extreme caution when stating predictive models involving attitudes and/or knowledge leading to behavior change. Evaluating knowledge and attitudes alone, while interesting, will likely have little value to ethics educators interested in assessing actual behavior change.

Since we cannot, at this point, simply make the assumption that increasing knowledge about ethical issues, changing attitudes about behaviors or developing moral reasoning skills will, in fact, result in more ethical behavior, what does the research tell us about what does work?

Addressing Human and Social Causes of Behavior

Educational programs aimed at changing "problem" outdoor behaviors must consider the social and cultural norms at work with the problem being addressed (Laska 1990). For example, after more than twenty years of permitting snagging for Pacific salmon in Lake Ontario tributaries, the New York State Department of Environmental Conservation (NYSDEC) is attempting to eliminate the practice. Snagging—the practice of taking fish by hooking them using means other than the fish voluntarily striking or taking the bait/lure in the mouth—has generated great conflict and controversy among various fishing groups and interests. In attempting to change angler behavior, NYSDEC is taking a long, hard look at the cultural and social norms of the snagging and other anglers, and the business communities along the rivers. By understanding "where these groups are coming from," decision-makers and educators should be better able to change behavior.

Equally as important as considering socio-cultural context in understanding behavior change is motivation. Because a demonstrated behavior can occur for any one or combination of reasons, understanding the motivation behind the action is at least as important as identifying the action itself.

Research Review on Behavioral Change

By looking at the findings of research reviews, we can begin to see what methods outdoor educators should avoid and what methods they can use to influence behavior. In this section, we focus on reviews conducted by Dwyer et. al. and Hungerford & Volk, and mention the work of several others.

"Before" and "After" Strategies

In 1993, Dwyer et. al. reviewed research dealing with behavioral change that related to the environment, and described many intervention strategies and behavior-change techniques of interest to outdoor ethics educators. They grouped the studies according to whether the treatment (intervention strategy) occurred before (antecedent) the expected target behavior or after (consequence). For example, researchers attempted to obtain target behaviors with the antecedent treatment groups through:

- exposure to written or oral information,
- assignment of individual or group goals,
- commitment from the individual,
- the selection of personal goals,
- competition between individuals or groups, and
- establishment of team goal by group consensus.

The consequence treatments included:

- feedback signaling direct, explicit and reliable rewards or penalties;
- feedback signaling indirect, uncertain, and distant rewards or penalties;
- reward to the individual/group; and
- penalty to the individual/group.

Which treatments worked best? Antecedent conditions that used commitment, demonstration, and goal-setting were able to influence behavior, at least for the short term. Consequence conditions changed behavior only while the consequences were in effect.

Dwyer et. al. also noted many omissions in the research. They found few studies comparing interventions. They also found few studies following up on the initial studies; those that did found no permanent behavior changes. Unfortunately, in light of the positive results in character education, Dwyer et. al. also failed to find and review studies that examined programs in which individuals or groups set their own goals. (1993)

Ownership and Action

Hungerford and Volk, through an extensive review of research (1990), came to three important conclusions:

1. Instruction that focuses on ownership and empowerment changes behavior;
2. Ownership of an issue is critical to responsible environmental behavior; and
3. Awareness is not enough to cause long-lasting behavioral change.

1. Instruction that focuses on ownership and empowerment changes behavior;
2. Ownership of an issue is critical to responsible environmental behavior; and
3. Awareness is not enough to cause long-lasting behavioral change.

Hungerford and Volk also identified six critical educational components that research showed can maximize behavioral change:

1. Teach significant ethical concepts and the learner's relationship with and obligation toward them.
2. Provide carefully designed and in-depth opportunities for learners to achieve a level of ethical sensitivity toward the environment, the outdoor activity and each other that will promote a desire to behave appropriately.
3. Provide a curriculum that will result in an in-depth knowledge of the ethical issues involved.
4. Provide a curriculum that will teach learners the critical thinking skills needed for issue analysis and investigation of ethical problems *and provide the time to apply the skills.*
5. Provide a curriculum that will teach learners the citizenship and interpersonal skills needed to address and resolve ethical issues *and provide the time to apply the skills.*
6. Provide a learning setting that increases the learner's expectancy of reinforcement for acting responsibly, i.e. developing learner's internal locus of control. (1990)

Locus of Control ***(place of control) is concerned with an individual's sense of how much or little he/she feels in control of his/her experience. Empowerment and ownership bring the locus of control within the individual. This is known as an internal locus of control. An external locus results from a feeling of disenfranchisement, feeling unable to influence what happens, feeling "out of control."***

Other researchers support Hungerford and Volk's recommendation to include action components in the curriculum to improve behavior. According to Weigel, effective behavioral change occurs when "in addition to providing knowledge about an issue, information (is also) made available regarding both the type of action implied by that knowledge and specific guidance as to how to carry out that type of action" (in Gray 1985). The message *must* be specific about what behavior is expected if behavioral change is to occur.

Howe and Disinger found that responsible environmental behavior is linked to another kind of action—long-term student involvement with environmental issues. To reach this point, they suggest that learners need to understand ecological concepts, the environmental issues involved, and the action strategies needed to affect change. They also need to have concern for the quality of the environment, a belief in their ability to make a difference, hands-on experience in action strategies, and the commitment to act (1988).

According to Hungerford and Volk, another kind of long-term involvement—that of significant, positive contact with the outdoors, often in nonformal educational settings—leads to environmental sensitivity. Tom Tanner, who assessed the significant life experiences of environmental leaders, also makes this point. These leaders reported that their positive environmental attitudes and actions grew from spending large amounts of time in nature with family, friends or significant individuals. Teachers who served as positive role models are also able to influence their students' attitudes and actions (Hungerford & Volk 1990; Tanner 1980; Peterson 1982).

In analyzing 128 behavioral studies related to the environment, Hines et. al. identified personality factors leading to the intention or desire to act. These include positive attitudes toward the environment and toward taking action, locus of control, and personal responsibility (Hines et. al. 1986-87).

Implications for Outdoor Ethics Education

So what does all this really mean for outdoor ethics education? In thinking about the results of the research reviews, remember that they focused on changing behaviors toward the environment. To the extent that outdoor ethics education shares this goal, this research is very relevant. Because outdoor ethics also focuses on responsible behavior toward activities and individuals, caution is advised in generalizing the research results in these areas.

Understand that these strategies may cause only short-term changes in behavior, or no change at all:

- using consequences, rewards, and incentives
- providing only information, focusing mainly on issue awareness
- using persuasive communications, such as brochures or signs urging good behavior

Internally motivated behavior change over the long term requires:

1. Strategies involving commitment, demonstration and goal-setting.
2. Helping learners develop environmental sensitivity and ecological knowledge, personal *ownership* in environmental issues, and *empowerment* through showing students how to achieve change and giving them the confidence that they can take action and make a difference.
3. Providing long-term follow-up support and reinforcement—essential if the behavior change is to be permanent.
4. Assuring that the six components recommended by Hungerford and Volk, as described on page 29, are included in the outdoor ethics education curriculum.

Strategies that Work .....
Try These:

Commitment, demonstration and goal-setting:
Ask individuals to sign a commitment to pick up all trash they find along a stream while fishing (bring home a limit of litter), provide opportunities to demonstrate this behavior, and set goals for the amount of litter picked up.

Ownership and empowerment:
Ask group to identify an outdoor ethical issue of importance to them. Explore issue, investigate from different perspectives, talk to groups representing different viewpoints. Brainstorm and identify possible ways to improve situation. Choose course of action, implement and follow up. Evaluate.

Long-term involvement and followup
Establish a long-term commitment to the group or individuals involved in your program. Plan to stay with it for the long haul, and be there for them...after school lets out, after the season is over, after the program finishes up. Become a mentor.

Action
***Do** something, don't just talk about it. If litter is a problem at the local fishing hole, get the group involved not only with litter clean-up but with solving the problem of why litter is there in the first place. The group not only feels good about their service to the community, they feel empowered to make positive, long-lasting changes.*

Relevancy
Discuss issues that pertain to your community. If deer baiting is not a problem, but trespassing is–focus on trespassing.

Involve group in establishing their own behavioral guidelines

Help the group decide what their behavioral boundaries are, but don't tell them what they should be. Help them reach consensus on what they feel is appropriate behavior, and then help them see how they might improve. Give them the choices, help them decide, and let them experience the consequences of their decisions, good and bad, unless safety is a factor.

> ***Ownership personalizes environmental issues, creating individual ownership of the problem or issue. Learners acquire ownership when they understand an issue in depth and identify with it personally. Empowerment enables people to sense that they can make changes and resolve environmental issues. Learners become empowered by acquiring skill in environmental action strategies and believing in their ability to make a difference.***

5. Providing environmentally positive experiences in nonformal outdoor settings over long periods of time.
6. Emphasizing teachers/leaders as positive role models.
7. Focusing on *action* strategies.
8. Using relevant ethical issues within the social and cultural context of learner.
9. Encouraging long-term involvement with an issue, with guidance from leaders and teachers who model concern, know effective action strategies, believe they can make a difference and are committed to act.
10. Involving the group in establishing behavioral guidelines for its members.

The most promising strategies for outdoor ethics education help the learner begin to look at ethical problems as something that "belong to me and that I can and will do something to change." We must also provide the ownership, empowerment, and follow-up to maintain any changes in ethical behavior. According to Hungerford and Volk, "it seems obvious that learners need to be reinforced for positive behavior over time." Equally apparent is the fact that no single isolated strategy is going to work. An integrated approach to outdoor ethics education—actively involving learners, using a relevant socio-cultural context and done over the long term—is most likely to result in sustained, ethically-motivated outdoor behavior.

4 Approaches to Outdoor Ethics Education

Now that we've reviewed the approaches to ethics education in general, let's take a look at what is happening with *outdoor* ethics education. We'll look at some classic approaches, current ideas, and new strategies coming online. We'll see what research doesn't support, what can be improved, and which strategies are based on what the literature says is most likely to succeed.

Public Awareness Campaigns & Codes of Ethics

Public awareness or promotional campaigns use techniques borrowed from the advertising world to promote better outdoor ethics. That advertising can influence public behavior is without question—particularly where selling products is concerned. But how effective are promotional campaigns when the object is to influence ethics-motivated behavior, or to develop ethical fitness and competence?

The centerpiece for most of the outdoor ethics campaigns is a formal code of ethics. Groups of concerned individuals often develop these codes and come up with catchy phrases to describe the behavior being promoted. According to George LaPointe, formerly of the International Association of Fish and Wildlife Agencies, "The key to the code being successful is using and marketing it." (Marshall 1993) Code promoters use bumper stickers, tackle box stickers, public service announcements, comic books, curriculum materials, wallet cards, videos, brochures and posters.

Public Awareness Campaigns

- ***Hunter's Pledge***—*Izaak Walton League of America*
- ***Angler Conservation Education***—*National Marine Fisheries Service in the southeastern United States*
- ***Tread Lightly!***—*U. S. Forest Service, Bureau of Land Management and off-highway vehicle manufacturers*
- ***Leave No Trace***—*U. S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, Bureau of Reclamation, and the National Outdoor Leadership School*
- ***Future 21***—*Sport Fishing Institute (now merged with American Sportfishing Association)*

In support of this approach, Marshall (1994) points out that visual media and thirty-second sound bites may be the *only* opportunity to reach large numbers of outdoor recreationists, and the best way to influence the general public's perception of their activities. In producing the Hunter's Pledge, for instance, the Izaak Walton League of America hoped to not only promote ethical hunting behavior but "to inform the public that hunters strive to behave legally and ethically and are mindful of their public image." Marshall does not argue that mass media approaches are the *best* way to *educate* outdoor users or develop ethical competence. However, given that media sources may be the only way to reach large numbers, public awareness strategies may have an impact on public perception. They may also set the stage for further ethics education by creating a state of awareness.

Promotional campaigns sometimes attempt to reach schools with curriculum materials. Tread Lightly!, a federal government/industry partnership to reduce impacts of off-highway vehicles on public and private lands, publishes curriculum materials for grades four to six. Designed to be taught during science units about erosion, the curriculum centers around discussion of the Tread Lightly! pledge and code of ethics. By showing the effects of off-highway activities in a colorful poster, the program attempts to make the erosion concepts more personally relevant to the students, and by extension to their parents. Tread Lightly! offers a full array of posters, decals, pins, mugs, shirts, coloring books, and educational materials to support their message.

Although the effectiveness of programs such as the Hunter's Pledge or the Tread Lightly! curriculum has not been evaluated, the research cited earlier indicates that students are unlikely to change their long-term behavior based on these approaches. The research discussed in Chapters One and Three shows that when behavioral guidelines are dictated externally, change is likely to be short-lived. According to Gray et. al. (1985) "Specific informational strategies are probably the least effective as free-standing manipulations..." when behavior change is the desired outcome. When the object of outdoor ethics education is to influence ethics-motivated behavior or to develop ethical fitness and competence, clearly a public awareness campaign as a standalone strategy is not likely to succeed.

Angler Ethics

1. *Keep Only the Fish Needed*
2. *Do Not Pollute - Properly Dispose of Trash*
3. *Sharpen Angling and Boating Skills*
4. *Observe Angling and Boating Safety Regulations*
5. *Respect Other Anglers' Rights*
6. *Respect Property Owners' Rights*
7. *Pass on Knowledge and Angling Skills*
8. *Support Local Conservation Efforts*
9. *Never Stock Fish or Plants Into Public Water*
10. *Promote the Sport of Angling.*

– Future 21

See Appendix B for additional examples of codes of ethics promoted by outdoor organizations.

About Codes

Codes pervade outdoor ethics education. Hunter education, trapper education, and many fishing education curriculum materials typically contain some form of code or pledge. Some programs discuss why participants should adhere to a code. In other programs, participants must sign a pledge and make a commitment to following the code. Participants in some programs are simply given a code and told, asked, or encouraged to live by it. (See Appendix G for examples of codes of ethics.)

Although codes by themselves are not likely to change behavior, they can combine with other organizational features to bring about some behavioral change. For example, new members of an organization become socialized through identifying with and committing to organizational goals, and interacting with other members who may exert enough peer pressure to make a difference in ethical behavior. In this instance the group norms regarding ethical behavior can exert a powerful influence on group members. The research examined in the character education, environmental education, and behavioral fields would seem to support this. It would be an interesting hypothesis to test.

Making Codes Work

People who actually participate in developing a code of behavior may be more likely to change their behavior because of their investment in the process. They literally "own" the code. The keys are constant discussion, practice and refinement of ethical guidelines, wrestling with ethical situations, and developing a personal/group/community code in which participants feel ownership. Because developing the code takes place over time—an essential element for behavior change—this approach may have great potential for promoting ethical behavior. It is a far more empowering process than simply handing out a predetermined code and demanding adherence. (See Appendix H for a worksheet on developing a code of behaviors.)

Cautions about Campaigns and Codes

Outdoor ethics educators need to identify specifically who they want to reach and what they want to accomplish with their programs. As stated above, there is no evidence to support the effectiveness of either public awareness campaigns or codes in improving ethical behavior of outdoor recreationists. But if we want to increase *public awareness* of efforts to develop more ethical outdoor users, then the mass promotion of a code may be indicated. We can probably assume that the advertising industry knows what it is doing when it sells something to the public.

Still, caution is strongly advised against allowing the popularity of campaigns and codes to lull us into complacency. Consider the cost of creating those campaigns, for example—could we better use those resources in programs that actually change ethics-based behavior? What good do we do if we influence public opinion but fail to change the behavior that caused the poor public perceptions in the first place?

Causey states "ethical hunting and fishing have a lot more to do with attitude, intention, and deliberation than with adherence to specific codes of conduct or do/don't lists." (1994) She points out that frequently it is "the attitude and intent of the sportsperson, not his or her particular act, that are morally questionable, and attitudes and intentions are not subject to regulation through laws and conduct codes."

Public awareness and promotional campaigns may play an important role in an overall ethics education plan, but they should not be relied upon as the primary vehicle to achieve ethics-related behavior change.

Public awareness and promotional campaigns may play an important role in an overall ethics education plan, but they should not be relied upon as the primary vehicle to achieve ethical competence and behavior change.

User Education Courses: Lectures

Most state agencies use the traditional lecture format in their courses for outdoor recreationists, often relying on instructors to serve as role models. Because hunter education generally is regarded as effective in changing safety-related behaviors to reduce hunting accidents, state agencies often assume that adding ethics to a hunter education course will also improve ethical behavior. In a typical hunter education program, ethics and responsibility occupy about one hour in a ten-hour course (Elliot 1991). The ethical segment often relies on the instructor introducing a code of ethics and exhorting students toward the attainment of greater ethical heights while afield.

There are two problems with this approach. First, research shows that hunter education courses may *not* be effective in improving hunter behavior. A study of Virginia's standard hunter education course found no correlation between completion of the course and field behavior among dove hunters (Bromley et. al. 1988). A study in Wisconsin found *higher* violation levels among hunter safety graduates than among those not taking the course (Jackson & Norton 1979), and another showed serious problems with hunter behavior even after taking the course (Jackson 1980). These studies resulted in changes in hunter education curricula; it remains to be determined whether or not changes in hunter behavior were impacted.

"Appreciation and knowledge about hunting does not guarantee safety, ethical conduct, or skilled hunting in the field! It is downright dangerous to think that a ten-hour course will take care of our concerns about hunting accidents, let alone perpetuate our treasured traditions. A new standard must be set in this country, or public hunting is in for deep trouble." (Bromley 1994)

The second problem involves teaching methods. As noted in Chapter One, we have known for more than sixty-five years that lectures, didactic techniques, and moralizing—the standard hunter education approach—are not likely to improve ethical behavior.

Dr. Peter Bromley, who for many years has studied and participated in the development of hunter education efforts, states "Appreciation and knowledge about hunting does not guarantee safety, ethical conduct, or skilled hunting in the field! It is downright dangerous to think that a ten-hour course will take care of our concerns about hunting accidents, let alone perpetuate our treasured traditions. A new standard must be set in this country, or public hunting is in for deep trouble." Bromley suggests that ethics education is critical, although he admits that preaching ethics has little impact, and teaching ethics is far more difficult than teaching skills (1994).

Getting students directly involved is more effective than lecturing them. It is important to make them think, reason critically, discuss, choose and defend an ethical course of action.

Beyond the Lecture: Interactive Methods

Interactive approaches have caught the imagination of many outdoor ethics educators. Ninety-five percent of state hunter education coordinators believe that role plays, dilemmas and discussion methods are most effective in promoting hunter ethics (Elliott 1991).

Interactive techniques, when done properly, teach more effectively than lectures simply because they *engage* students in the learning, involving them directly in the learning process and requiring them to invest more of themselves. Students must think critically, reason morally and discuss, choose and defend the most ethical course of action.

A one-hour interactive segment within a ten-hour course does not have most of the conditions needed to change behavior.

But do interactive approaches by themselves truly change behavior? In the right context, within a moral community containing the key elements listed in the previous chapters, interactive approaches offer great possibilities. In a one-hour segment within a ten-hour course, most of the conditions needed to change behavior are absent.

Instructors need training to present and guide dilemma discussions that will produce the desired results.

This is not to suggest that interactive techniques be abandoned. In truth, the likelihood of success is still far greater with these methods than with a lecture. Within the limitations of current hunter education formats, interactive methods may be the best hope for success. Realistically however, the success is likely to be small. Hunter education coordinators and other outdoor ethics educators should seek alternatives to the existing ten-hour hunter education format. This format would appear to be a very real limiting factor.

Interactive methods

Small group discussion

The Missouri S.P.O.R.T. program uses a small group discussion approach. The larger class divides into smaller groups, which must reach consensus on such issues as what constitutes "slob" behavior. Participants have to support and defend their response. The S.P.O.R.T. program emphasizes that there are not always right or wrong answers in these situations (Martin 1985).

Small group discussions use procedures we know to be effective cognitive learning tools. However, as noted previously, we also know that knowledge alone is not a good predictor of behavior.

Dilemma discussions

This approach presents a situation that poses an ethical problem with more than one "right" choice. The instructor may walk students through a judgment/decision-making model, and help them identify choices, outline consequences, and discuss the results (Bromley 1994). Wisconsin hunter educators take this process to a more personal level. Instructors "walk through" the student's line of reasoning and the consequences of each possible choice, after which the student is asked to choose and defend the choice. This public choice and defense thereby becomes a commitment (Jackson et. al. 1987). (See Appendix F for a worksheet on developing dilemmas.)

Clearly, instructors need training to present and guide dilemma discussions that will produce the desired results. They need to know how to create a non-judgmental, supportive climate. They must also recognize other factors—such as the organization of the classroom, the impacts of their body language and their teaching style (mediator vs. authoritarian)—that directly influence the success of the discussion (Beyer 1976).

We also need to remember the other limitations of moral dilemmas described in Chapter One. For example, gains in moral reasoning due to this approach require numerous discussions over at least a semester. And, although we have evidence that moral dilemmas improve moral reasoning, we do not have evidence that they change behavior. As long as we remember these limitations, we may want to include dilemma discussions as *one* of our strategies in a program that includes other approaches.

Trigger Films/Slides

Trigger films or slides create an audiovisual image of an ethical scenario, setting the stage for a multisensory experience in decision-making. The scenario is presented on-screen, the moment of truth arrives, and just before the actors make a decision to resolve the situation, the film or slide show stops, and the discussion begins. Students identify the problem, evaluate the consequences of each potential choice or course of action, and discuss the rationalizations, explanations or thought processes used in deciding and resolving the issue. As with the dilemma discussion approach, the key is a trained instructor skilled in guiding a discussion and using the judgment/decision-making process. (See Appendix E for information on developing a script for a trigger film.)

New Jersey uses a trigger slide program in a nine-hour course that people must take who have violated hunting laws. At the end of the course, the students must sign a commitment to behave in a responsible manner (New Jersey 1993). An evaluation of this method would be relatively easy to accomplish and may provide some good insights into the effectiveness of the trigger film process.

Studies evaluating the effectiveness of trigger films and slides have not been located. Because they are so similar to moral dilemma discussions, we can assume that trigger films may inform people but they probably don't create long-lasting change.

Interactive Videos

Interactive videos are the most recent addition to outdoor ethics education. Based on technology developed by law enforcement and the military, interactive videos use life-size projected images, laser-equipped shotguns, computer-controlled variables, and live instructors to help students learn safe and ethical hunting practices. While watching the video, the individual chooses an action in a simulated hunting situation and the computer-operated control matches the decision with the appropriate consequence, all played out on the screen.

What Would You Do?
You and your cousin are out spring turkey hunting during gobblers-only season. A tom with two hens approaches, responding to your expert calling. Just as they come into range your cousin fires, and one of the hens drops.
What do you do?

While trail biking with a group of friends on a park road you come across a newly posted sign stating that trail bikes are prohibited on the side trail you planned to use. Your buddies ignore the sign and take off down the trail.
What do you do?

A rare bird is spotted at a beach nearby. You look for it, hoping to add it to your life list. Upon arriving at the beach you notice a large crowd trampling the sensitive dune vegetation, all looking for the same rare bird.
What do you do?

You've scouted all week to find the perfect spot to photograph a bison silhouetted at sunset. Finally you're set up perfectly, the bison appear...and they are obviously disturbed by your presence. You reluctantly back off, and almost immediately another photographer rushes in and grabs the very spot you just vacated.
What do you do?

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The National Wild Turkey Federation has produced a turkey hunting interactive video. Rob Keck, NWTF executive director, says "What this approach does is put students in as close to real situations they might encounter in the field, allows them to make choices, provides instant gratification and evaluation. Above all it is *fun*." (1993)

Interactive videos may be fun, but right now they are expensive to produce and require a high level of expertise to set up and run. We also don't know if they are effective—the technology is too new. Based on research on similar strategies we can infer that interactive videos will likely achieve excellent results in teaching skills and knowledge and give the learner good opportunities to exercise judgment, but may not change ethics-based behavior once someone is out in the field and unobserved.

There are additional concerns that as interactive videos and virtual reality games become more accessible they will create a video arcade atmosphere when the exact opposite is required. The Super Mario Brothers get up and fight again after being knocked down. The victim of a hunting accident will not. Obviously the instructor plays a critical role in setting the stage and creating the appropriate atmosphere.

Role Playing

Role plays often motivate discussion through their multisensory involvement. The instructor describes a scenario, presenting the group with an ethical dilemma, and then assigns various roles to each member. The dilemma is then played out, with variations that can include switching roles or introducing new variables each time the scenario is repeated.

"When students argue for a point of view different from their own and are rewarded for it, their attitudes are apt to change.... When people play certain roles they take on attitudes consistent with those roles. Studies of this type are called 'counterattitudinal advocacy'." (Jackson undated c)

Research has shown that attitude shifts alone are not good predictors of behavior. The research examined shows that the peer influences, norm activation, and group processes involved in role plays should serve to support behavioral changes, but research evaluating this specific approach was not identified.

Project WILD

A number of states responding to the National Wildlife Federation survey listed Project WILD as one of the ethics education methods they use (Appendices A, B). Although both WILD and Aquatic WILD include some moral dilemma and other ethical education activities, neither program claims to be designed to change ethical behavior. That states are using these programs specifically for ethics education indicates the pressure they feel to improve outdoor behavior. Research to date has not shown Project

WILD to be effective in changing any student behavior (Gilchrist 1993; Standage Accureach 1990).

Role Models

Outdoor Heroes as Role Models

Ethics are, at least in part, a product of the socialization of the individual within the community. Community role models, cultural stories and myths all serve to reinforce ethical development. Two educators are advocating the use of hero stories in ethical education, but each approaches the task differently.

Kilpatrick advocates a role model/hero approach, based on his belief that youngsters aspire to having their lives be like a hero story (1993a; 1993b). By sharing hero stories and presenting heroes as characters to be emulated, Kilpatrick believes educators can develop their students' character and influence their behavior. Kilpatrick's recipe for moral education includes returning to the traditional, authoritarian character education—reading, moralizing, presenting historical examples, devising ceremonies and rituals, creating codes of behavior in a quasi-military fashion—methods that we know do not change behavior (Born 1993; Hartshorne and May 1928–30; Leming 1993).

In *Environmental Heroes and Heroines*, Clifford Knapp has also developed a heroes approach to ethics education (1993). Students read about heroes, examine their lives and discuss a particular environmental ethic within the context of the heroes' lives. There is to date no evidence demonstrating the effectiveness of Knapp's approach in changing behavior, though this instructional unit appears to be a highly effective means of communicating cognitive concepts and discussing values relative to the environment. *Environmental Heroes and Heroines* provides an interesting context for learning about environmental ethics even if behavior is not impacted.

Public Figures as Role Models

In 1992, the Sport Fishing Institute released a video featuring two sports figures promoting a code of ethics for young anglers. *A Youth's Guide to Ethical Angling* shows golfing great Greg Norman and auto racer Bobby Allison discussing the Sport Fishing Institute's ten-point code of angler ethics, developed as part of their Future 21 program. The use of public figures and the ease of access to video offered a different dimension to outdoor ethics education. Though there has been no evaluation of this program, the use of an externally imposed code and the lecture-style approach of Norman and Allison would suggest limited effectiveness in influencing behavior. In addition, the fact that the sports figures were both white males further limits this video's effectiveness in reaching broader-based audiences.

Teachers as Role Models

Numerous researchers and educators believe that teachers can provide an important role model for effective character education, particularly when the teacher's influence extends over significant periods of time. The keys to successfully fulfilling this role include modeling appropriate behavior, showing approval or disapproval of student behavior as necessary, and offering logical explanations for the approval or disapproval. Leaders can further enhance their effectiveness by making sure a student feels approval as a person, even though the student's action is being disapproved. They also need to be able to communicate at the students' level of cognitive development. (Bennett 1988; Beswick 1992; Howe & Disinger 1989; Leming 1993; Lickona 1983, 1991; Sichel 1988) As these conditions are fulfilled, teachers may then become mentors.

Mentoring

Early involvement in the outdoors under the mentorship of a caring adult has been shown to be a key element in the development of a strong commitment to the environment (Orr 1991; Tanner 1980). Mentoring programs guide youngsters and families as they encounter ethical situations in the outdoors. The primary advantages of mentoring are the long-term, sustained involvement and the social support mentoring provides for the apprentice youngster or family.

Mentoring is rooted in Western classical civilization. Before the Greek hero Ulysses embarked on his epic explorations, he entrusted the education of his son, Telemachus, to his valued friend, Mentor. Mentor's task was greater than just formally educating the young man. He also served as a confidante and role model, providing not only an academic education but ethical and character guidance, functioning as a parent in Ulysses' absence.

Because mentoring ties in many of the critical elements that are important for changing behavior, outdoor ethics educators can concentrate on this approach with a reasonable expectation of success.

Community Clubs

Community clubs, because they can include most of the elements identified as important for ethical development by the character education and behavior research experts, may offer one of the best opportunities available to outdoor ethics educators. As described in Chapter One, community clubs provide effective development of ethical behavior in youth through social support, peer influences and constructing group norms. Youth clubs formed through such organizations as 4-H, local rod and gun clubs, conservation groups and schools, can easily include programs on outdoor ethics if their adult leaders are trained in ethics education techniques. It is also reasonable to assume that local chapters of adult community organizations such as Trout Unlimited or the

NatureLink®:
A National Mentor Program

The National Wildlife Federation has developed an outdoor ethics education program called NatureLink that is built on the concept of mentoring. Mentors are volunteers selected for their knowledge of particular outdoor skills and commitment to care of natural resources. They are people who enjoy sharing what they know and are willing to commit their time, not just for the NatureLink family weekend, but for a year following.

Families attend a weekend in an outdoor setting and learn skills such as fishing, camping and hiking. Each family is assigned a mentor as soon as they arrive at the NatureLink site. At the end of the weekend, families are asked to make a resource pledge. Mentors work with their families to identify a simple stewardship goal they can take home and put into practice. By remaining in contact after the weekend, mentors serve as reminders and can provide additional encouragement and assistance to help families complete their pledge and stay involved in outdoor activities.

NatureLink and its use of mentors will be evaluated by a university research team during the next two years to determine if participants do indeed change their behavior in regard to resource stewardship actions.

New York's Angling Ethics Education Program

New York's Sportfishing and Aquatic Resources Education Program (SAREP) combines a number of the key elements for successful outdoor ethics education. SAREP's volunteer Instructors operate small community/neighborhood clubs and mentor-apprentice programs. Rather than handing down a pre-defined code of ethics, instructors are trained so they can guide their groups in developing, modifying, and using their own code of ethics. They ask the youngsters to consider what ethical duty, obligation, or *responsibility they may owe each of the following:*

- *other anglers they meet*
- *their fishing club*
- *other users of the resource*
- *landowners*
- *the local community*
- *administrative/regulatory agencies*
- *the sport or tradition of fishing*
- *the individual fish and other aquatic organisms*
- *the aquatic resource as a whole*

As part of their deliberations, they consider what obligations they owe to the club and to each other—a technique that encourages an open climate of mutual respect and builds group ownership and esteem.

Each time they go fishing, they review the code both before and after the experience, discussing any problems and reevaluating whether the ethical guidelines they developed remain valid or need to be modified. Over time, through constant reevaluation of the code and the peer and group norms developed to help each other live up to it, the youngsters commit themselves to behaving ethically.

SAREP's group process approach includes most of the key elements necessary for development of good ethical behavior. Youngsters develop their own norms and code through group discussion and consensus. They use their code in an activity they personally enjoy. And they actively discuss and reinforce the code that they have developed. All of this occurs in a climate that is safe, respectful, and builds self-esteem. The instructor serves as a positive role model and mentor who guides rather than dictates.

Izaak Walton League of America may have similar positive impacts in the outdoor ethics education of its active adult members.

Peer Teaching

The best way to really learn something is to teach someone else, and outdoor ethics is no exception. For example, as the youngsters involved with outdoor programs progress and mature into their teens, they can assume more responsibility and assist in the teaching and leading of programs in community clubs, classes and apprentice-mentor programs.

Summary

As we search for effective outdoor ethics education methods, we must remember that ethics are very complex. We may never identify the single best approach. Instead, we may need to use a variety of methods that complement each other, which together help develop and change ethical behavior.

We must also take a hard and honest look at long-established programs, and question the degree to which they are effective in influencing outdoor behavior and developing ethical competence. For example, research has shown that the most prevalent outdoor ethics education efforts—traditional hunter education-style programs and public awareness campaigns—do not seem to affect ethical behavior. They may communicate cognitive concepts and skills effectively, but they do not develop ethics. Clearly, we need to rethink our reliance on these standard approaches.

Research points to the effectiveness of interactive approaches—especially those that are done over an extended period—that involve building group consensus, use peer interactions, encourage action involvement with relevant issues, and take place in a community setting. Mentoring programs and community clubs seem to hold special promise, although more research is needed to evaluate their effectiveness in outdoor ethics education.

The more promising methods face a major limitation, though—the need for well-trained instructors. In order to lead effective ethics education programs, instructors need to understand how people develop their ethics and how to lead the activities and discussions that enable ethical fitness and competence to develop. Finding the time, expertise, and funding for this necessary training—with the likelihood that most instructor programs will be volunteer-based—will be a major challenge as we develop our outdoor ethics education programs.

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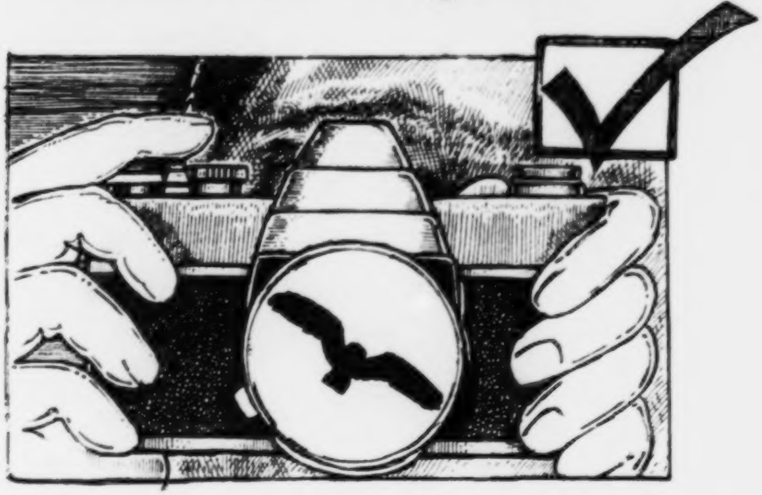
5 Evaluating Ethics Education Programs



"We assume we are doing some good," says Gene Smith of the National Wild Turkey Federation's ethics education efforts. "We hope we are reaching people. We have no way of evaluating our effectiveness."(1993) In those three short sentences, Smith sums up the hopes and frustrations of organizations and agencies that have attempted to address the need for better outdoor behavior.

How do we know the way we've always done it works?

We owe it—to our constituents, our agencies and organizations, our various outdoor traditions and the natural world—to *know* we are doing the best job possible, and to *know* we have based our ethics education programs on proven techniques. Yet few programs have addressed evaluation beyond counting participants and passing out occasional opinion surveys.

Why has so little evaluation been done? Two reasons come to mind. Most program managers and educators are not in the field because they enjoy conducting research. They enjoy conducting programs, and once they conclude a program they are ready to move on to the next. Another reason lies in the nature of evaluation. Effective evaluation requires time, incentive, expertise, and resources. The difficulty is compounded when the outcomes being evaluated are human behavioral changes and motivations. Nevertheless, we need to see evaluation as an integral part of our program, not something to be done 'when there's more time'.

Without evaluation, outdoor ethics education is doomed to repeat the mistakes of the past—mistakes which, as we have seen, at least some educators have known about for 65 years. To ensure the future of the natural world and our activities in that world, we need to understand and use the best methods of developing ethical outdoor behavior. We need to evaluate our programs thoroughly and honestly, and to share the results so others may benefit.

Without evaluation, outdoor ethics education is doomed to repeat the mistakes of the past.

About Evaluations

When designed properly, an evaluation tells us if we are meeting our goals and objectives and implementing our programs as we planned, provides information for program improvement, and helps determine the worth of the program (Marcinkowski 1993; Martin et. al. 1994). According to Wilkins (1980), good evaluations can increase:

- educational, fiscal and moral support from others
- effectiveness of our work and that of others
- personal and shared feelings of accomplishment.

Unfortunately, instead of conducting evaluations specifically designed to assess intended outcomes—most of which involve changes in knowledge, attitudes and behavior—many natural resource agencies look instead at easily measured areas such as number of publications distributed, number of pieces published or used by the media, and number of people in attendance at programs. Little evidence, however, supports any correlation between number of contacts and changes in behavior.

Agencies may ask participants to evaluate a program. This type of subjective evaluation offers valuable feedback on teaching methods and participant satisfaction, but it is far from the best indicator of behavioral change. Participants may be able to indicate how their *intentions* changed, and at some later point possibly indicate how their behavior changed. Though still subjective, this approach may offer some interesting research opportunities.

A frequently held assumption is that poor outdoor behavior is sometimes, or perhaps mostly, caused by ignorance or lack of skill. If this is true, we should be able to measure changes in knowledge, skill levels or attitudes resulting from our programs, and assume that better educated individuals with higher skill levels will then understand and practice more ethical behavior. As we have discussed in previous chapters, the research evidence to date does not support this assumption. It would, however, be a very interesting assumption to test in an outdoor ethics education context.

Since we cannot at this point prove a correlation between the teaching of skills and knowledge and the developing of more ethical behavior, we are left with the problem of actually measuring changes in human behavior, a difficult proposition even in the best of controlled laboratory circumstances. To compound the problem, we really need to not only measure human behavior but also the motivation for the behavior. We have not set an easy task before us!

We are concerned with influencing *actions,* changing behaviors and understanding motivations, and with measuring the success of our outdoor ethics education efforts in changing attitudes and behaviors. We need to identify or develop evaluation techniques that measure those motivations and behavior changes.

It's important to identify or develop evaluation techniques that measure the behavior and attitude changes desired.

An Environmental Stewardship Example

Let's look at the development and evaluation of environmental stewardship attitudes and behaviors—they may offer clues for effective ethics education evaluation.

The Stewardship Indicators Pilot Project defines stewardship as "the moral obligation to care for natural resources and the action undertaken to provide that care. The moral obligation to care for natural resources implies the existence of an ethic of personal responsibility, an ethic of behavior based on reverence for the Earth rather than guilt for past transgressions against the environment, and a sense of obligation to future generations" (Dixon et. al. 1994).

The Stewardship Indicators Pilot Project is identifying indicators of stewardship motivators, intentions, behavior and barriers in the Lake Ontario Basin in an effort to develop a measurement tool. It defines the differences among indicators as follows:

Motivators *may be internally or externally driven. External motivations include financial, legal or normative (peer/social pressure, community norms). Internal motivators include knowledge, health risks (personal and community), fear of consequences, and affective (values and ethics). To measure motivators, researchers have focused on key values and beliefs, perceived responsibilities, awareness and knowledge, and environmental concern.*

Intentions *express the extent of commitment to responsible stewardship. They are the behaviors in which people would like to engage, to meet their stewardship obligations.*

Behaviors *include membership and activity in environmental organizations, and a variety of personal decisions (family size, volunteer service, political activity, product purchasing and disposal, food consumption, water use, household waste, lawn and garden practices, energy usage).*

Barriers *may include "cultural, psychological, economic, political, sociodemographic, and knowledge factors." (Dixon et. al. 1994) Barriers are what prevent intentions from being manifested as actual behaviors.*

How are these indicators being measured? Primarily through surveys—an evaluation technique used in many studies that measures environmental stewardship motivations, intentions, beliefs, attitudes and concerns.

In the Beginning

The first thing we must do is to clearly and specifically articulate what we are trying to accomplish by stating goals and objectives or outcomes. Objectives are statements indicating what changes we expect to occur, during what period of time, as a direct result of what efforts. The better we are at writing objectives that include specific, measurable outcomes, stated in terms of participant behavior, the easier the evaluation process.

The New Environmental Paradigm

A number of researchers are using the New Environmental Paradigm (NEP) scale as one accepted means for measuring attitudes toward the environment (Dixon et. al. 1994).The New Environmental Paradigm (NEP) scale measures where an individual's values fall on a continuum between an ethic that is human-centered and utilitarian (objects in the environment are valued for their usefulness to humans) and an ethic that is biocentric (values all life) and is environment-focused (Dunlap and Van Liere 1978; Albrecht 1982).

Objectives

- *state the desired outcome in specific terms*
- *are clearly measurable*
- *state the means of measurement*
- *have a time frame for accomplishment.*

Here's another rule to remember:

A well-written objective is
Specific
Time-bound
Outputs/benefits are targeted
Realistic
Measurable
Singular

Specific objectives and good evaluation design turn a frustrating exercise into an effective evaluation.

Objectives in outdoor ethics education may focus on four main areas:

1. ***Knowledge***—understanding the rationale for and basis of ethics; understanding outdoor ethical guidelines or codes of behavior and the reasons for them; legal aspects of outdoor behavior
2. ***Skills***—in applying moral reasoning; using judgment/decision-making skills; ability to develop personal and group codes and enforce them
3. ***Attitudes***—how people perceive ethical behavior; how they feel about behaving ethically; what they value about the outdoor experience and the natural world
4. ***Behavior***—what people actually do in situations requiring ethical choices; why they do it.

The inclusion of all four areas in our objectives may seem inconsistent. It is abundantly clear by now that by measuring those objectives specifically focused on behavior we'll find the best direct evidence of success. Still, the knowledge, skills and attitudes that may contribute to the motivation for that behavior do have a relationship with behavior. For example, the knowledge and skills involved with moral reasoning and critical thinking contribute to ethical fitness and competence, as do certain attitudes. While we do not have a good understanding of the relationships among these, and we cannot use them in a predictive sense, it may be beneficial to include all areas in our objectives. Hopefully it will advance understanding as to just how each is related to behavior.

Deciding on the Evaluation Process

Once we have a clear statement of goals and objectives, we can begin to think about how to evaluate the program's success. What type of evaluation should we use? Should we try to do the evaluation ourselves, or arrange for someone to help?

Informal self-evaluation usually makes no attempt to control for bias and other variables, often involves no comparisons, and frequently relies on anecdotal evidence supplied by program staff. It can offer useful information to program staff and administrators, but has little value outside that immediate context. It is a start, however, and often a good one when it provides the descriptive information leading to the development of more quasi-experimental designs.

Evaluation using a quasi-experimental design is far more valuable because it attempts to control variables so that discernible change can be attributed to the ethics education program. Typically, this evaluation compares groups who have received the education with groups who have not. The results are of great interest not only to the program evaluated, but to all ethics educators because of the implications for their programs.

Quantitative or Qualitative?

As we consider evaluation methods, we must also decide if we want to use quantitative or qualitative methods, or perhaps both. Most natural resource agencies and organizations approach research and evaluation from a scientific point of view, and thus use methods accepted in scientific inquiry, both quantitative and qualitative. Quantitative methods involve rigidly controlled procedures for collecting and analyzing data, and they describe results as statistics. Quantitative research attempts to establish statistically significant relationships among variables and between causes and effects, and to predict and explain phenomena. It assumes a single reality (one set of truths about the situation) composed of observable and verifiable facts (Marcinkowski 1993).

Qualitative research is gaining acceptance in the social sciences, though research in the field is still dominated by quantitative methods (Mrazek 1993). It assumes that multiple realities are possible. It attempts to understand social phenomena from the participant's perspective and values, and uses techniques that are descriptive rather than statistical. The results are not able to be generalized beyond the program evaluated.

Qualitative approaches—because of their descriptiveness and broader points of view—offer promise for evaluating outdoor ethics education. Unfortunately, natural resource agencies generally are far more comfortable with the quantitative methods on which they base their biological and ecological decisions. Researchers and educators continue to debate the merits of both quantitative and qualitative methods. Perhaps the truth lies in the middle—that quantitative and qualitative approaches complement each other. At the very least, they increase the number of options available to evaluators (Cantrell 1993; Marcinkowski 1993; Mrazek 1993). As natural resource agencies focus more on social and human dimensions areas, they will likely become more comfortable with qualitative approaches.

Hiring It Out or Doing Your Own?

Outside evaluators offer the twin advantages of greater evaluation expertise and an objective eye. The disadvantages are the cost and lack of familiarity with your program. Arranging for outside evaluation involves contracting with university personnel or private consultants specializing in program evaluation. Some agencies may have experienced evaluators on staff. It is a good idea to have a solid statement of objectives ahead of time in order to match what your program needs to know with the evaluation expertise of the consulting organization. Some may specialize in attitude assessment, for example, and not have much experience with behavioral evaluation strategies. In any case, an outside consultant can usually make the evaluation go easier. In fact, it can actually be fun!

Bennett's Pyramid

Bennett suggests defining objectives in a pyramid of seven levels of indicators, each building on the previous one (1972; 1975). By considering specific indicators for each level, we can build a series of objectives that lead to the expected outcome or outcomes of our ethics education efforts. The seven levels are:

1. **Inputs**—*How much time or money was spent?*
2. **Activities**—*How many programs were conducted, curriculum developed, videos completed?*
3. **People Involvement**—*How many people completed program? How many schools received curriculum? How many students saw the video?*
4. **Reactions**—*How did participants feel about program, curriculum, video?*
5. **Changes in Knowledge, Attitudes, Skills, Aspirations** —*What new understanding or skills did people learn? What changes occurred in attitudes or values?*
6. **Practice Change**—*How was any change put into practice? What behavioral changes occurred?*
7. **End Result**—*What changes occur in public perception of anglers, in access for hunters, and in safety performance?*

Obviously, the farther up the pyramid the more difficult the evaluation and the longer it takes to see results—but the more meaningful the outcome. If the desired outcome of our efforts is to improve the ethical conduct and competence of hunters, anglers and other outdoor enthusiasts, objectives and evaluation in ethics

Designing an Ethics Education Evaluation

Remember that the ability to conduct a good evaluation is created right when the planning begins. Without good outcome objectives you won't know where to begin looking for results. Remember, too, that evaluation data gathering can and should take place throughout the program, not just at the end.

To plan and conduct an evaluation, follow these six steps: design the evaluation, collect data, analyze data, report results, apply results, and evaluate the evaluation process.

The first step—designing a good evaluation—is the most important and most difficult step. Without it, you will likely be engaged in the frustrating process of gathering and trying to interpret worthless, irrelevant and unrelated bits of information. Let's look at an example of how you can design an evaluation.

Steps in Designing an Evaluation

Martin et. al. described the following process in *Resident Outdoor Program Evaluation (1994).*

1. ***Determine the evaluation audience.***
   Ask yourself: Who has an interest in the results of the evaluation? Who makes decisions about the program? Rank the evaluation audience in terms of influence and authority. Focus the evaluation to meet the most critical information needs of the most important audience making program decisions.
2. ***Clearly state the purpose of the evaluation.***
   Why are you evaluating the program? What are you evaluating? What do you hope to find out as a result of the evaluation? What decisions do you plan to make with the evaluation information?
3. ***Determine the best sources of data.***
   Where can you obtain the needed information? Who or what will give you the most useful information?
4. ***Choose or create a design for the evaluation.***
   Will your purpose be served through a one-shot, intensive look or do you need to conduct an on-going, continuous evaluation? Who will you involve in the process? What evaluation model is most likely to give you the desired results? Some evaluation models are listed in the box on this page, and are described more fully in Appendix C.
5. ***Identify resources.***
   With careful planning, you can conduct a good evaluation with limited resources. Ask yourself: What financial resources are available? How much time can be devoted to the evaluation? What knowledgeable individuals can offer their expertise?
6. ***Establish a time frame.***
   Set deadlines and establish time frames for each evaluation step. As you plan the timing, consider your purpose,

education ought to focus on the sixth and seventh levels—Practice Change and End Result—that aim for action outcomes.

The importance of action outcomes in the evaluation process is illustrated by Washington State's evaluation of Project WILD. In this evaluation, Project WILD was criticized for not developing measurable action outcomes focused on behavior change and for not articulating action outcomes that are clearly linked to Washington's Department of Wildlife agency goals (Tudor 1992).

Evaluation Models

Martin (1994) suggests the following evaluation models:

- *Case studies (Stevenson 1985)*
- *CIPP (Context, Input, Process, Product) Decision-Making (Guba & Lincoln 1985)*
- *Dialectic (Henderson 1991)*
- *Expert Opinion (Eisner 1979)*
- *Goal Attainment (Tyler 1950)*
- *Goal-Free (Scriven 1974)*
- *Importance/Performance (Henderson 1992)*
- *Matrix (Stake 1972)*
- *Naturalistic (Guba & Lincoln 1985)*
- *Quasi-Experimental (Campbell & Stanley 1963)*
- *Responsive (Guba & Lincoln 1985)*

For a concise description and consideration of the advantages and disadvantages of each, see Appendix C.

evaluation model, the schedules of the evaluators, and the best time to gather the needed information.

7. ***Choose data-gathering techniques.***
   What evaluation techniques will give you the most valid and reliable results for your information needs? The answer depends on what you are evaluating:
   - *To evaluate ethical knowledge:* standardized test or questionnaire, interviews, focus groups.
   - *To evaluate skills:* standardized tests, direct observations, portfolio assessments, self-evaluation and reporting.
   - *To evaluate attitudes:* surveys using Likert scales or semantic differential questioning methods.
   - *To evaluate changes in behavior:* self-evaluation and reporting, artifact analysis, interviews and focus groups, direct observation, participant observation, and unobtrusive observation (See box on page 49).

Designing an Evaluation: Hypothetical Example

Let's assume you've been asked to evaluate a ten-hour program that develops angler skills and safety. Less than one hour of the program is devoted to angler ethics. The program is taught around the state by trained volunteer instructors, using materials developed and supplied by the state natural resource agency. A written test at the end of the course indicates participants have increased knowledge about fishing, and demonstrations show they have increased their fishing skills. But how should the ethics segment be evaluated?

Determine Goals and Objectives

To decide how to evaluate changes in ethics, first look at the program's goals and objectives.

Goal:

To increase on a statewide basis the level of angling ethical behavior.

Sub-goals:

1. To increase angler knowledge of ethical behavior.
2. To improve angler attitudes toward ethical behavior while fishing.
3. To increase participant ethical behavior while fishing.

Objectives:

1. On a standardized written test, the score on ethics-related knowledge questions for all participants in each class will meet or exceed ninety-five percent.
2. Ninety-five percent of all participants will be able to list at least five angling ethics behavioral guidelines discussed in class.
3. Program participants will be able to identify, with ninety-five percent accuracy, unethical behavior that they observe

A Word About Evaluation Research Methodology.... Evaluation worth doing is evaluation worth doing properly. To truly measure the impacts of your program as well as advancing knowledge of effective ethics education, good, solid methodology must be used. There is absolutely no point in doing otherwise.

Elements of Ethics Education

The Advisory Task Force, which assisted in this report, identified the questions that a comprehensive outdoor ethics education effort should cover.

Does the ethics education effort positively affect

1. *the resource (biotic community)?*
2. *human perceptions of the natural world?*
3. *human behavior in the outdoors?*
4. *human perceptions of duties toward the natural world?*
5. *human behavior toward each other?*
6. *the outdoor sport or activity?*
7. *public perceptions of the outdoor sport or activity?*
8. *participants' critical thinking skills?*
9. *knowledge of ethics and ethical behavior?*
10. *attitudes toward ethical behavior?*
11. *values and beliefs about sport or activity?*
12. *motivations to behave ethically?*

Rather than attempting to evaluate all of these questions—a monumental task!—concentrate your evaluation efforts only on the most important areas for your program.

Evaluating Behavior: Evaluation Techniques

Self evaluation and reporting

The easiest method to do, self-evaluation and reporting is also the least reliable. It is used to describe the situation or develop a case study, or to compare self-reported results from one year or program to the next. With some effort it may be possible to develop a self-evaluation or survey that asks participants to report anonymously on the behavior they observe. You would need pre- and post-tests to establish the relationship between behavior change and the ethics education program.

In spite of their ease in administration, good self-evaluations and surveys require a trained eye to develop. Be sure the questions being asked are really designed to obtain the information you need.

Artifact analysis

While artifact analysis is usually convenient and relatively easy to use, it requires rigid interpretation controls, and is subject to misinterpretation. Artifact analysis may be used to evaluate behavioral change, particularly if done before and after an education program. The likelihood of misinterpretation can be reduced with a post-trip interview or focus group looking at motivations.

Example: Examine the litter left behind by a group before and after an ethics education program.

Artifact analysis can combine with self-reporting. Ask participants to keep journals that you can later analyze for indicators of behavioral change.

Interviews and focus groups

Interviews and focus groups are time-consuming to set up and require trained evaluators. They may offer useful approaches to assessing behavioral change as a result of an ethics education program. They are good techniques for assessing motivation.

If participants are uncomfortable talking about their own behavior, direct the discussion more generally toward group behavior or observations. You could also interview family members or group leaders about changes they have observed in subject behavior. A pre- and post-experience format will more reliably indicate behavioral changes.

Direct observation techniques

In spite of the potential problems with direct observation–time consuming to establish patterns and factor out variables; requires skilled, unbiased observers; people behave differently when being observed (Hawthorne effect); and ethical concerns using human research subjects–these techniques have great promise for ethics educators looking at behavior changes. When done in a pre/post format with a follow-up interview to assess motivations, direct observation techniques offer the best possibility for attributing behavioral change to the ethics education program.

To avoid problems, consider using participant observers (anglers fishing alongside the observed group) or unobtrusive observation measures such as video cameras (Bammel and Bammel 1979). It is also important to do multiple observations to establish patterns and to factor out unrelated variables (Gray 1985).

in audiovisual aids or in actual situations presented in class.

4. With each unethical situation they identify, participants will be able to describe an ethics-based behavioral alternative, stating the ethical rationale used to justify the choice.
5. Ninety-five percent of the participants will be able to use an ethics-based justification for choosing the most right action from among at least three possible courses of action in an ethical dilemma given in class.
6. Ninety-five percent of the class will demonstrate improved attitudes toward angler ethics as measured by a Likert scale instrument administered in a pre/post design.
7. Upon program completion, participants will demonstrate a fifteen percent average increase in self-reported angling ethical behaviors, as measured by a pre/post follow-up survey.

The accomplishment and assessment of the objectives becomes more difficult as the numbers get higher. For example, although objectives one through five deal primarily with knowledge outcomes, objectives four and five involve a much higher order of critical thinking and problem solving than the first three, and are more difficult to assess.

You also need to use evaluation instruments with established validity and reliability. This ensures that conclusions accurately reflect what the data has found.

Design the Evaluation

Now let's design the evaluation, using the process described above:

1. ***Determine the evaluation audience.*** Your primary audience is the agency decision-makers who fund the program. You and your colleagues make up another audience, because you wish to strengthen the program.
2. ***Clearly state the purpose of the evaluation.*** You want to improve your effectiveness in developing ethically fit and competent anglers and to build support for the program among the decision-makers.
3. ***Determine the best sources of data.*** You will acquire information by testing and surveying participants.
4. ***Choose or create a design for the evaluation.*** Since this is your first attempt at evaluating ethics education, you may want to do a case study that will provide background information to help you plan future evaluations and use more experimental designs. If you want to look at a larger sample of participants and measure progress in reaching program objectives, consider using the goal attainment or matrix models described in Appendix C.

Seven Steps in Evaluation Design

1. *Determine evaluation audience*
2. *State purpose of evaluation*
3. *Determine sources of data*
4. *Choose evaluation design*
5. *Identify resources*
6. *Establish time frame*
7. *Choose data-gathering techniques*

If your target audience includes administrators of natural resource agencies, consider using a quasi-experimental design. When done properly, it can control for intervening variables and indicate cause and effect relationships with a high degree of validity and reliability.

If, however, your main audience includes other educators who want information about the effectiveness of ethics education, you may be more apt to obtain useful information with a qualitative approach.

5. ***Identify resources.***

   You will need a graduate student for three months, and a budget of $2000 for expenses. Allocate ten days of your own time for the evaluation.

6. ***Establish a time frame.***

   The evaluation will be completed within three months.

7. ***Choose data-gathering techniques.***

   Given financial and time constraints, the expertise available, and the lack of previous evaluation information, you've decided to conduct case studies on two classes with twenty participants each. You'll focus on objectives that deal with knowledge and reasoning in ethical dilemmas (#2-5) and with behavior (#7).

   Different objectives require different approaches, so you've decided to administer written tests to evaluate objectives two and five, oral tests for objectives three and four, and a pre/post survey to evaluate objective seven. You'll also conduct a focus group to further evaluate number seven.

   Because this case study involves a small number of participants, you won't be able to say with certainty that your program caused any changes observed. But you will have two sets of data you can compare for patterns, and build a baseline of information you can use in the future if you decide to evaluate your program again using a quasi-experimental design.

For additional examples of how the New York Sportfishing and Aquatic Resources Education Program (SAREP) and the National Wildlife Federation NatureLink® program designed their ethics education evaluation, see Appendices M and N.

Interpreting Your Evaluation

Whatever evaluation method you choose, be sure that you understand how to interpret the results in accordance with the actual findings rather than conjecture or wishful thinking. If you have contracted out your evaluation, any reputable university or consulting firm will help you understand the limitations associated with your evaluation. Even if you do not contract out the evaluation, it is always a good idea to take your evaluation design to an experienced researcher for input.

This is particularly important in evaluating your own programs. A recent example demonstrates how easily results can be misinterpreted.

Ruh, in *Hunter Behavior in America* (1994), surveyed state fish and wildlife agencies about the status of and changes in hunter behavior. In summarizing, Ruh states "Respondents indicated that overall hunter behavior was about the same or better than five years ago. Hunter education programs were cited as the single most significant factor in this generally positive trend. An overwhelming ninety-six percent of agencies consider hunter education programs the major positive influence on responsible behavior afield." Ruh recognized some of the limitations of the survey methodology, including the lack of a random sample and the high degree of subjectivity of the respondents. (The responding agencies happened to be the same agencies that conduct hunter education.) Yet the Izaak Walton League, which sponsored the study, announced in a news release that the study demonstrated that "hunter behavior in the U.S. is good and getting better," and that hunter ethics has "turned the corner." (IWLA 1994) Putting this kind of rosy spin on the results of an admittedly flawed survey ultimately only detracts from the credibility of the sponsoring organization and undermines the good it is attempting to do.

It is only fair at this juncture to point out that the IWLA has been for many years and remains today one of the few national organizations consistently committed to outdoor ethics and changing poor outdoor behavior. The Ikes stand tall in this respect. This makes it all the more important not to compromise when reporting results. Efforts to improve outdoor ethics are thereby hindered, not helped.

Reporting the Results

One of the most important things you can do after your evaluation is completed is report the results. Obviously you will do this with your primary audience. But it is important to report your results to the field as well.

Outdoor ethics education is in its infancy, particularly in terms of evaluation. Only a few pioneering studies have been done. If this field is to develop and mature it must begin networking, establishing dialogues among evaluators, and above all sharing the results of evaluation efforts.

Currently there is no single avenue established for this purpose. Outdoor ethics education evaluators have the following possibilities for reporting their results:

Journal of Environmental Education
Heldref Publications
1319 Eighteenth St. NW
Washington, DC 20036

Journal of Human Dimensions of Fish and Wildlife Management
Mike Manfredo, editor
College of Natural Resources
245 Forestry
Colorado State University
Fort Collins, CO 80523

Wildlife Society Bulletin
The Wildlife Society
5410 Grosvenor Ln.
Bethesda, MD 20814

Journal of Experiential Education
Association for
Experiential Education
2885 Aurora Ave #28
Boulder, CO 80303

Journal of Outdoor Education
Department of Outdoor
Teacher Education
Northern Illinois University
Box 299
Oregon, IL 61061

ERIC Clearinghouse on Rural Education and Small Schools
Appalachia Educational Laboratory
PO Box 1348
Charleston, WV 25325

Environmental Ethics Journal
Environmental Philosophy, Inc.
Chestnut Hall
Suite 14
1926 Chestnut St.
University of Texas
Denton, TX 76203-6496

Fisheries
American Fisheries Society
5410 Grosvenor Ln.
Bethesda, MD 20814

- Various state outdoor and environmental education publications

- Proceedings of natural resources conferences such as the North American Wildlife and Natural Resources Conference, the North American Symposium on Society and Resource Management or the Governor's Symposium on North America's Hunting Heritage.

- Coalition for Education in the Outdoors
  SUNY Cortland
  Box 2000
  Cortland, NY 13045
  607-753-4971

The Coalition publishes a quarterly newsletter/magazine, *Taproot*, and sponsors a biennial research symposium specifically focused on sharing the latest research in outdoor education. The proceedings of these symposia are published.

The authors of this paper are also very interested in facilitating the flow of information on outdoor ethics education research. We hope that more results can be reported if a followup report on the topic is done three years from now. Please contact Bruce Matthews, 121 Fernow Hall, Department of Natural Resources, Cornell University, Ithaca, NY 14853; phone 607-255-9370; fax 607-255-2815; e-mail bem3@cornell.edu.

6 Conclusion

What Does It All Mean?

What do the results of two years of research and writing on outdoor ethics education mean for the aquatic education specialist, hunter education coordinator, outdoor educator or watchable wildlife program administrator? What do we really know? Where does it leave us and **where should we go from here?**

We are limited by a lack of research and evaluation specific to outdoor ethics education. What we do know is based on research done mainly in other areas of ethics and character education and mostly within formal classroom settings. We know that in spite of the central role most schools play in American society, formal education, particularly in public schools, generally takes place in "thin" moral communities. In some ways we might logically assume that the closer our outdoor ethics education efforts resemble the traditional public school classroom approach, the less likely we are to see significant results. Whether this is because of the methods used, the setting or some combination thereof is unclear.

What is clear is that the *social context* for ethics education plays a very significant role in the success of the effort. Using small groups, guiding them as they assume and share responsibilities, emphasizing peer activities such as peer counseling and problem-solving, keeping the focus on ethical issues of direct relevance to the group, and involving them with community service and action projects addressing these issues hold much promise, particularly when done over a significant period of time. Programs involving mentoring and community or neighborhood clubs—building moral communities—appear to offer the best combination of strategies for successfully developing ethical fitness and competence.

Methods may even be secondary to the context. The use of interactive techniques such as dilemma discussions and developing and refining group codes of behavior will be far more successful when the ethics education takes place within and is supported by stronger moral communities. It is quite clear from the research that presenting facts about ethics is less important than the social context in which ethics education is done.

This really should come as no great surprise. After all, human beings have always learned to behave ethically through interactions with each other, and this is best done in families, neighborhoods and communities. It is only with recent changes in the family and a loss of a sense of community, coupled with the tremendous growth in our population and the globalization of society, that we have felt the need to intervene in the development of ethics. Perhaps the real surprise is that we are only now turning to those structures that supported ethical development in the first place.

So back to our original question: What does all this mean for the outdoor ethics educator? Clearly the development of ethically fit and competent outdoorspeople requires creating, supporting or linking-up with long-term moral communities through programs such as organized youth camps and 4-H community clubs, Girl Scouts and Boy Scouts, and apprentice-mentor programs such as Big Brothers/Big Sisters. Using existing programs or developing new ones such as New York's Apprentice Hunter Program, and developing ethical competence using role modeling and the interactive strategies discussed in this report offer the greatest hope for building ethical fitness and competence in the next generation of outdoorspeople.

Getting Started

Those who have stayed with this report until the end are likely wondering how you might now accomplish outdoor ethics education. After all, the results of past efforts are not encouraging! **All indicators point to the need for a major shift away from most of the outdoor ethics education strategies currently being used.** Assuming you still believe outdoor ethics education to be a vital component of your program, how do you begin?

It seems clear that statewide, short-term programs need to move toward community-based, long-term programs. (For specific applied examples of outdoor ethics education strategies, see Appendix P). The good news is that the community infrastructure supporting local efforts is almost always in place. It is up to you to find it, work within it and facilitate the application of outdoor ethics education. One excellent place to start is your local Cooperative Extension office. Offices are located in almost every county in the United States, and are supported by the research base of the land-grant university in each state.

It is also appropriate to ask how much is possible for you to do. **Outdoor ethics education certainly is not the sole responsibility of natural resource agencies.** That it appears to take place best in long-term moral communities only confirms this. It may be possible for natural resource agencies to become more involved in developing moral communities through engaging in partnerships with organizations such as 4-H (for example, the Sportfishing and Aquatic Resources Education Program in New York), supporting the ethics education efforts of groups such as the American Birding Association, or developing programs themselves such as the pilot Apprentice Hunter Program in New York. It may be possible, and arguably is imperative, for natural resource agencies to move in the direction of supporting these types of efforts. **It does seem fair to look for and/or build a partnership infrastructure that will help shoulder the burden outside of the agency or organization.**

At the very least, agencies should examine current outdoor ethics education programs in light of the findings of this study and move toward making the needed changes. If the best an agency can do is simply maintain a segment on outdoor ethics within a ten-hour hunter education course, or place interpretive signs at outdoor behavior trouble spots, then they need to base such efforts on the best available information to make them as successful as possible. At the same time, agencies should not overestimate the potential impact of these efforts, at least not until they are properly evaluated. When done in conjunction with coordinated ethics education efforts from *all* sectors, the broad message will be clear: We as outdoorspeople intend to act according to the highest valuing of the environment and the most worthy traditions of our activity, with consideration for each other and with respect for ourselves.

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A

Angler Ethics Education Survey and Results

An Angler Ethics Survey
for Aquatic Resource
Education Coordinators

from the
National Wildlife Federation
8925 Leesburg Pike
Vienna, VA 22184-0001
703-790-4267

Spring 1992

Special Note: *The National Wildlife Federation is developing an angler ethics program and would appreciate your assistance with this survey. As a state coordinator, you may address angler ethics as part of your aquatic resource education "angler education" program. You may include it as a separate topic, or incorporate the message throughout your program. Perhaps there are additional audiences you want to reach, other messages or materials you would like to include. Your filling out this survey will help NWF know if we can structure our program to benefit you in any way.*

For your time and effort, when you return the completed survey we will send you your choice of ***Ranger Rick's NatureScope*** *"Wading Into Wetlands" or "Diving Into Oceans" (an $8.95 value).*

Please return survey by MAY 15, 1992. Thank you for your help with this project!

Cheryl Riley
Director of Outdoor Ethics

For the purposes of this survey, we will define **Angler Ethics** as "responsible behavior of anglers to their sport, fisheries and water resources, and other people."

General Information/Philosophy

1. Do you think angler ethics is a matter of concern? To whom? And why?

2. What objective(s) do you want to achieve in teaching angler ethics?

3. Do you think ethics can be taught? What methods are you aware of that actually work?

4. How do you monitor or test for successful ethics training?

Your Involvement in Teaching Angler Ethics

5. If ethics is taught as a part of your angler education program, how is it incorporated into the program? (If it isn't a part of your program, skip to next section.)

Taught as separate subject __ yes __no (Approximate time ____________)

Integrated into all of course? __yes __no

6. What methods are used to teach angler ethics? (Check ALL that apply and explain specific activities on back please.)
lecture ____ reading ____ discussion ____ role play ____ activities ____
other (specify) ____

7. What is covered in your ethics section? (And please describe how you teach it.)

8. Do you train your instructors in techniques on how to teach ethics? If you do, how much time do you spend on this training? How much time do the instructors spend teaching angler ethics to students?

9. What materials do you now use? (Enclose samples if convenient.) Are these materials meeting your needs? Are there materials or techniques that would help you in teaching ethics?

10. How would you rank the importance of teaching angler ethics as compared to the other subjects you teach in your angler education program? (Check ONE)
____ Most Important ____Very Important ____ Somewhat Important ____ Not Important

11. Do you think you are being effective? Please explain.

Your Angler Education Program

12. What audiences are you reaching with your angler education program? (age, sex, race, economic status, etc.)

What other populations would you like to reach?

13. Do you encourage your participants to get involved in water resource issues in their communities (such as attending public meetings, writing letters, being active in groups)? If you do, please give examples of what you do.

14. If available, would you use a teaching unit, activities or materials specifically addressing angler ethics in your program? How would you use these?

15. Have you ever worked with a sportsmen's club to put on an angler education program? How?

Please send me the following *Ranger Rick NatureScope* book — Pick ONE:
____Diving Into Oceans ____Wading Into Wetlands

COORDINATOR ______________________________ STATE ________________

____ Check here if you would like to be put on a mailing list for more information as the program develops.

Survey Results
1992 Spring Angler Ethics Survey
NWF Outdoor Ethics Division

Respondents:

Alabama
Alaska
Arizona
Colorado
Connecticut
Delaware
District of Columbia
Florida
Georgia
Hawaii
Idaho
Kentucky
Maine
Massachusetts
(both fresh & marine)
Minnesota
Mississippi
Missouri
Montana
North Carolina
North Dakota
Nebraska
New Mexico
New York
Nevada
Ohio
Oklahoma
Pennsylvania
Texas
Utah
Virginia
Vermont
Washington
Wisconsin
Wyoming

1. Do you think angler ethics is a matter of concern?

34 Yes
0 No
1 No response/data unavailable

To whom?
Examples included:
- **Landowners**
- **State management agencies**
- **Non-anglers**
- **Anti-anglers**
- **General population**
- **Conservation educators**
- **All resource users**
- **Aquatic resources**
- **"Conservationism"**

Why?
Examples included:
- **Concern for dwindling resources**
- **Desire for "sport" fishing experiences**
- **To promote sympathetic and open dialogue re: anglers' interests**
- **To promote environmental stewardship**
- **Aesthetics**

2. What objective(s) do you want to achieve in teaching angler ethics?

Examples:
- **Inform and educate**
- **Reclaim/restore native stock**
- **Affect behavior concerning environmental, specifically aquatic, resources**
- **Enhance wildlife experiences**
- **Reduce/eliminate waste, littering, vandalism**
- **Enhance perception/image of sport/sportspersons**
- **Maintain public access to private lands**
- **Appeal to persons "emotionally" sensitive to angler issues**
- **Promote fishing safety**

3. Do you think ethics can be taught?

28 Yes
4 No
3 No response/data unavailable

What methods are you aware of that actually work?
Examples:
- **Methods that invoke emotional reactions**
- **Education at an early age, i.e., clinics, public/private schools (the younger, the better)**
- **Media blitz**
- **Use of role models**
- **Persistency/consistency**
- **Seminars/workshops**

4. How do you monitor or test for successful ethics training?

Examples:
- **Questionnaires**
- **Number of citations issued**

- **Random sample surveys**
- **Pre-test, post-test follow-up**
- **Observation/evaluation by certified instructors**

5. If ethics is taught as a part of your angler education program, how is it incorporated into the program?
Most respondents answered that ethics was incorporated into their existing programs.

6. What methods are used to teach angler ethics?
Of the four methods listed, lecture, reading, discussion, role play and activities, most preferred discussion and lecture, with role play and activities next, and reading last.

7. What is covered in your ethics section?
Examples:
- **Land use ethics**
- **Law enforcement**
- **License procurement and state regulations**
- **Aesthetics**
- **Stewardship**
- **Conservation**
- **SFI Anglers' Ethics Code**

How is it taught?
- **Audio-visuals**
- **Follow-up discussions**
- **Role playing**
- **Manual used as resource/teaching tool**
- **Program designed around specific publication(s)**
- **Dilemma cards used to promote discussion**
- **Seminars/workshops**

8. Do you train your instructors in techniques on how to teach ethics?
20 Yes
6 No
9 No response/data unavailable

9. What materials do you now use?
Examples:
- **Anglers' guide**
- **Brochures**
- **Any relative publications, i.e., regional, state, national**
- **Bumper stickers**
- **Workbooks (AFTMA)**
- **Videos**

Are these materials meeting your needs? Are there materials or techniques that would help you in teaching ethics?
These questions were unanswered by the majority of respondents. However, it was suggested that videos would be helpful.

10. How would you rank the relative importance of teaching ethics?

Most Important	**10**
Very Important	**20**
Somewhat Important	**1**
No response/data unavailable	**4**

11. Do you think you are being effective?

Yes	**14**
No	**1**
Moderately	**4**
Unsure	**4**
No response/data unavailable	**12**

12. What audiences are you reaching with your angler education program?
Data included children K-12, adults, culturally diverse groups, special needs groups, and spanned the economic spectrum.

What other populations would you like to reach?
Preferences cited a broad spectrum of the population to include urban, suburban children/adults.

13. Do you encourage your participants to get involved in water resource issues in their communities?
16 Yes
9 No
10 No response/data unavailable

14. If unavailable, would you use a teaching unit, activities or materials specifically addressing angler ethics in your program?
25 Yes
4 No
6 No response/data unavailable

15. Have you ever worked with a sportsmen's club to conduct an angler education program?
24 Yes
6 No
5 No response/data unavailable

Telephone Interviews with Aquatic Education Coordinators

AUTHORS' NOTE: *Telephone interviews were conducted in 1994/95 with all state aquatic education coordinators or their equivalents. The following five questions were asked during each interview:*

1. *Do you address ethics as part of your angler education program?*
2. *What are your objectives in teaching angler ethics?*
3. *What specific methods do you use?*
4. *Have you done any evaluation? If so, what have you done and what methods have you used? What results have you found?*
5. *Are there any specific angler ethics problems that you feel you need to address with your program?*

All of the following reports were mailed to aquatic education coordinators to check for accuracy, so hopefully the information adequately represents each state's program. We appreciate the cooperation of all who participated.

—Matthews and Riley

STATE: Alabama
CONTACT: Jack Turner

Alabama is not currently addressing ethics as part of a formal education program. They do produce an angler outreach newsletter that is distributed by selected vendors statewide. Articles in the newsletter advise anglers of the best ways to conserve existing fisheries, management information, and catch-and-release techniques.

Staff report they are more in the survey and implementation stage and so are not evaluating their efforts at this time. In the coming year they will be surveying schools to get baseline data and then will set up pre/post surveys for their aquatic education program.

Catch-and-release seems to be fairly widely accepted in the state with people practicing it on their own in some cases. Staff say they want to promote proper stewardship rather than make iron-clad policies if possible.

STATE: Alaska
CONTACT: Jon Lyman

The Alaska Department of Fish and Game Aquatic Education Program changed its ethics education after hearing the preliminary report from the NWF at the 1994 AREA conference. To maintain Alaska's world class sport fisheries and continue to expand angler opportunity, ethics education in Alaska now includes an aggressive I&E effort targeting specific problems with angler impacts in some of our more popular combat fishing areas. A video on angler and landowner impacts along the Kenai River has proven very effective in alerting the public to the potential for damage to one of our most popular salmon rivers (free copies are available to AREA members). Follow-up videos, interpretive panels, video press releases, and print efforts are all part of our current efforts to influence angler behavior and ethics in Alaska.

Catch-and-release in Alaska is an example of one nationally accepted idea being successfully modified to our unique situation. We are focusing on developing a Selective Harvest program to replace our catch-and-release materials. Catch-and-release is opposed by both Natives and meat anglers in Alaska as being an unethical use of nature's bounty. By emphasizing the selective harvest of our abundant salmon and marine resources while supporting catch-and-release of resident species, we have found that we can have our fish and eat it too! Selective harvest material is being developed for use with both adults and kids in Alaska.

The Pathways to Fishing program has also proven successful in Alaska as a means of introducing youngsters to sport fishing. By having kids draw a picture of themselves fishing before going through the 12 stations, and then having them modify the picture to reflect what was learned, we reinforce the learning and can evaluate each session.

Alaska's unique situation as the last great stronghold for healthy stocks of wild pacific salmon puts a special burden on our efforts to create ethical anglers. We are attempting to shape long term responses in people from diverse cultural backgrounds. Our success will be measured in the continued health of our fisheries and the expansion of angling opportunity.

STATE: Arizona

CONTACT: Doug Thornburg

Arizona's Game and Fish Department hopes to create awareness and appreciation of how ethical behavior impacts the resource and people who use the resource. They have implemented a two-part aquatic education program: instructors go into classrooms to talk about angler ethics with students and distribute handout take-home materials. The department's lakeside facility is set up with displays and exhibits illustrating some of the points made in the literature, i.e., fishing line taken off reel and left on a bank by someone should be picked up, not left there. Instructors demonstrate safety/recommended catch-and-release techniques and encourage hands-on applications.

They have made no formal evaluation of the program but would like to. The state reports that compliance with regulations is their "number one problem", and interaction between anglers/nonanglers (how-to behavior), the second. Residents, in general, need to be made aware of the environment and the importance of caring for the state's natural resources.

STATE: Arkansas

CONTACT: Jeryl Jones

Ethics is considered an integral part of any state angler education program with the intention of teaching respect for the resource and users of the resource, and to encourage compliance with state regulations. Instruction is provided in fishing clinics using a manual, lecture, and hands-on application. They are also promoting a newly developed aquatic ed. curriculum to high schools in cooperation with the state agricultural agency. Vocational/ agriculture teachers have implemented the state aquatic ed. curriculum and are reportedly very impressed with the program. Arkansas also conducted 140 fishing derbies in 1994 where participants received hands-on instruction.

Arkansas has not evaluated their angler education program because they feel that ethics is a "personal" issue and they, frankly, don't know how to evaluate it. They report no specific ethics problems that are not already being addressed within their program.

State: California

Contact: Bob Garrison

California's Urban Fisheries Program, renamed "Fishing in the City," is preparing to "reach an urban constituency that is no longer connected to the environment" and elicit their involvement in protecting the state's natural resources. Ethics is an integral part of their new aquatic education program and a four-tier community outreach approach addresses ethical issues in part as they affect a diverse urban population.

Programs such as Project WILD, Salmonids in the Classroom, Urban Fisheries, Interpretive Services and Marine Outreach help wardens, biologists and educators to impress upon California's citizenry the importance of protecting the resource, and upon anglers in particular, their role in maintaining a healthy ecosystem. Brochures and flyers also help get out the message, and most products used in the program promote an ethical theme.

Recent completion of four of six focus group sessions by The Department of Fish and Wildlife have helped identify constituency needs and interests, and are providing a basis for evaluation of the Fishing in the City program. As a community-based program, it has been well-received and has been highly successful in providing opportunities that weren't there before.

Aware that opportunities also denote responsibility, focus group participants have expressed concern that many anglers, ignorant of state regulations, are exploiting the resource by taking more than their fair share or are flaunting the law by avoiding license purchases. Education of a diverse growing urban population and the enforcement of regulations appear to be the greatest challenges for California's Department of Fish and Game.

STATE: Colorado

CONTACT: Robin Knox

The Colorado Division of Wildlife has a page on "Being a Good Angler" in its workbook. Issues addressed include respect for the environment and for others, safety, not being wasteful, not littering and promoting good ethics among others.

Instructors talk about the subject and encourage group discussion. Staff think the current program covers the subject well and are considering developing cards with ethics subjects.

When interviewed, there had been no evaluation of their programs.

One of the areas the Division of Wildlife is interested in continuing to address is fishing without a license.

STATE: Connecticut

CONTACT: George Babey

The Department of Environmental Protection addresses ethics as part of a 10-hour class. They use several teaching aids, including a slide/tape show, "Before You Go Fishing," which includes ethics. They also use a Sea Grant video on "Trashing the Oceans," which covers plastics in the marine environment. Conservation officers and fisheries staff also discuss the subject as part of the class.

While ethics is not specifically evaluated, students complete surveys at the beginning and end of the class. Staff particularly like the slide/tape show because it generates conversation and presents "what if?" scenarios.

The state of Connecticut is concerned about continually losing access to fishing waters because of its growing population. There is a need to get people to understand the laws. Littering and vandalism of facilities are big concerns.

STATE: Delaware

CONTACT: Gary Kreamer

The Delaware Department of Natural Resources and Environmental Control has just begun to explore developing an angler education program by doing a couple of pilot programs. In doing needs assessments, they did not find fishing to be high on the list of topics that teachers, youth leaders, division staff and other educators statewide were interested in.

However, they received good feedback from middle school students who were shown the Nebraska video "Grandpa, Can We Go Fishing?" Students discussed the situations represented in the video and were asked "What would you do?" Both lecture and discussion were used.

End-of-session written evaluations of these programs (by both students and teachers) were positive, but more directed pre/post program evaluation systems need to be devised to assess the real impact of these programs on youth angling attitudes and practices.

The staff are concerned about addressing anglers' attitudes toward trash fish, taking more than the limit and conflicts with use of access areas. They plan to work with enforcement officers to better understand the problems they encounter.

STATE: District of Columbia

CONTACT: Adel Gordon

The District of Columbia addresses ethics primarily through its eight-week summer camp program. Youth come to the aquatic education center for instruction, where lectures on ethics are given, and Future 21 (codes) stickers are handed out. Resource ethics are also the focus for discussion during the river clean-up activities, as youngsters develop a sense of ownership and an understanding of their ethical relationship with the river.

The D. C. aquatic education program hopes to promote a cleaner river and resource, and to help fish populations by promoting catch and release through its ethics education efforts. It sees litter as its primary ethics problem.

Evaluation efforts have used angler surveys to gain input and feedback for the District's fisheries program, but have not specifically addressed ethics.

STATE: Florida

CONTACT: Scott Hardin

The Florida Game and Freshwater Fish Commission addresses ethics as part of two different programs—Urban Pond and Aquatic Education. They mention ethics everywhere possible in their aquatic education materials. A broad approach is used.

They do not currently do any evaluation of this part of their program.

Since Florida is a crowded state, there are several concerns. Largemouth bass is the most heavily impacted fishery. The Commission advocates catch-and-release to protect a finite supply. They feel they have made some progress on habitat issues. They are concerned about leaving something for the future.

STATE: Georgia

CONTACT: Chris Martin

The Department of Natural Resources addresses ethics in a "loosely knit fashion." Two approaches are used: 1) A code of ethics is printed in the Georgia Freshwater and Saltwater Sport Fishing Regulations, and 2) Ethics are emphasized during Kids Fishing Events which are sponsored by individuals, sportsman groups, government agencies, and civic organizations. Ethics emphasized as part of the Kids Fishing Program include: asking permission, leaving the area clean, learning to follow the rules, and respecting others. Since the youths' attention spans are short, the opportunity to teach is limited. The main objective of the program is to give them a chance to fish and to have fun.

There is almost no formal instruction with the program, although suggestions are given for different ways of conducting the clinics.

The Department is struggling with how to evaluate and realizes that kids aren't going to change with just one contact.

There are several angler ethics problems that need to be addressed, including littering (need to improve image of the angler), trespassing, and being aware of rules.

STATE: Hawaii

CONTACT: Randy Honebrink

Hawaii includes ethics in its aquatic education program primarily to encourage a change of attitude toward the resource, to emphasize the importance of catch-and-release, and to counter prevailing attitudes among "older fishermen" who want to take what they can when they can. To reinforce conservation, catch-and-release messages are promoted on local television stations. The Division of Aquatic Resources (DAR) is also attempting to educate people about how land use practices affect the ocean.

A student manual, lectures and discussions help to convey a conservation/ethics message in fishing clinics, and several information specialists from the division speak on the topic. Hawaii evaluates its aquatic education program, but not the ethics portion separately. The DAR reports that there are problems with fishing practices of immigrants, especially those from parts of southeast Asia.

STATE: Idaho

CONTACT: Julie Scanlin

The Idaho Department of Fish and Game reports that ethics is emphasized throughout their angler education program: brochures, fishing clinics, school curriculum, public programs and even their interpretive signs.

Two main objectives are addressed as part of their program:

Conservation—in the form of giving something back to the resource and future anglers.

Respect for and responsibility to oneself, others and the resource.

The Aquatic Education program is administered through the Information and Education Bureau, but cooperates regularly with other Department programs, such as landowner relations, volunteer program, and habitat programs to implement its ethics message. Aquatic Education also works with other agencies, state and federal, as well as sporting and conservation groups, to reach maximum audiences and best use of funds.

As the program has grown, the need to develop methods of evaluation has become evident. Tools are currently being developed to measure program effectiveness through their school programs by using a pre/post testing technique. Measuring improvement of field ethics is more complicated and Idaho is just now beginning to address this aspect.

Limited access to some of the premier boating fisheries poses the most acute ethics concern. Angler conflict rises in these situations. Efforts to distribute anglers, reset their expectations regarding access, and the addition of more sites for launching are all being used to ease the problem. Compliance with regulations and keeping a clean environment are ethical problems that are addressed through meetings, brochures and signage. Though Idaho has widely diverse resources and varied angler opportunities, they are seeing an increase in angler pressure. They are trying to identify key problem areas and working with local Department personnel and sporting groups to address the issues.

STATE: Illinois

CONTACT: Larry Dunham

In Illinois, conservation ethics are addressed throughout the two one-hour classroom sessions of the Illinois Department of Conservation's fishing clinics. The following objectives are part of their emphasis on teaching ethics: Each person has a personal responsibility a) to conserve and use wisely all natural resources, b) to understand and respect the resource, c) to understand that pollution is detrimental to fishing and aquatic environments, d) to understand and obey fishing regulations, e) to understand the importance of catch-and-release, f) to promote catch-and-release, g) to respect the rights of other anglers and landowners.

The methods of teaching most often used are real-life examples or situations with which participants would be familiar. For example, a workbook depicts two scenes of a lake, one pristine and one polluted. Participants are asked to pick which lake they would prefer to fish and tell why.

No evaluation of the program has been conducted.

The problems that most concern the Department of Conservation are getting citizens to understand their personal responsibility to help prevent pollution, promoting catch-and-release, and encouraging anglers to respect the rights of others who are fishing.

STATE: Indiana

CONTACT: Warren Gartner

Indiana does not have a formal aquatic education program. They did sponsor Fishing Fun Days with local organizations. These were full-day programs and healthy aquatic systems were discussed as part of the program.

They hope to start a program as soon as the coordinator position is unfrozen. Outdoor ethics are discussed in Project WILD workshops, advanced teacher workshops on a variety of wildlife topics and in the habitat improvement action grant program.

STATE: Iowa

CONTACT: Barb Gigar

The Iowa Department of Natural Resources integrates ethics into its education manuals, which includes *Fish Iowa* for schools. They also work with cooperators and provide materials for fishing clinics, including a station on ethics. They address caring for the environment from a recreation standpoint.

Materials given to instructors include work sheets and videos. Hands-on instruction is encouraged and courses finish with a field trip.

Although students have not yet been evaluated, physical education teachers were mailed a survey to determine how they were using the materials and what units they were teaching the most.

The Department is interested in addressing general stewardship questions and teaching anglers how to notice problems. Littering is the most obvious problem, but nonpoint pollution is the biggest.

STATE: Kansas

CONTACT: Roland Stein

Kansas teaches ethics at fishing clinics and incorporates ethics in their Project Wild program. Their aim in teaching ethics is mainly to encourage "true" sportsmanship among anglers and to promote better attitudes and awareness of the resource.

Fishing clinics teach hook and release, need for length and creel limits to help fish reproduction, and how and why to conserve water. In Kansas, parts of the state have water shortages, and to make sure no one is using more than his/her fair share, there is a need for discussion of ethics. Fishing safety is also stressed, not only to inform anglers about personal safety but to make them aware of how their actions may affect the safety of others—to keep the sport safe.

No evaluation/follow-up has been done, however, because it is felt that measuring an intangible such as ethics is difficult and, in their opinion, no satisfactory model exists. The biggest challenge for Kansas is to make people aware of the significance of habitat, and the importance of managing specific habitats.

STATE: Kentucky

CONTACT: Lonnie Nelson

The Department of Fish & Wildlife teaches ethics, not only as an integral part of aquatic resource education, but in other programs as well. In 1994, six thousand students were sent to camps where they were presented with dilemmas covering courtesy towards others, getting permission to access private property, respect for state regulations (Is it stealing not to buy a hunting/fishing license?). Kentucky relies solely on the sale of licenses to support conservation efforts and this is impressed on campers (5th/6th graders) plus high school and 4-H students who enjoy the use of state resources.

The Department's short term goal in teaching ethics is to affect students in a positive way, and their long-term goal: they are hoping to raise a generation of ethical people who will influence others. They want to teach a sense of stewardship.

The ethics portion of their program includes, primarily, the use of dilemma cards and hands-on interactive activities and discussions. They try to avoid lectures, if possible. The Department has done only a cursory program evaluation, but had hoped to do a fuller evaluation this year. This will be delayed, however, because they have no additional funds to hire help.

Specifically, Kentucky believes that the importance of developing good landowner/angler relationships must be stressed since the future of sport fishing for the next generation may depend on private landowners and their willingness to allow access for fishing. Role models are needed to coach young anglers in particular. Everyone needs to understand why conservation is important and how state regulations supporting the resource are complemented by ethical practices such as catch-and-release.

STATE: Louisiana

CONTACT: Paul Jackson

Primarily through lectures, clinic instructors provide information on catch-and-release, property rights, and respect for others' space. Louisiana's mission is to impart a greater understanding of the resource, especially respect for laws and regulations, and respect for the rights of others. Though it is felt that ethics is difficult to teach, Louisiana sees an increasing need to address ethical issues as they specifically relate to environmental degradation.

The Department of Wildlife and Fisheries has attempted to evaluate their hunter education program, but couldn't come up with a good model. Although they are mandated by the state to maintain a database with names of hunter education participants, they would not track anglers unless also mandated because of the work and cost to maintain records. Their angler education program has been in place five years.

Whether camping, fishing, boating or hunting, litter is Louisiana's biggest problem. According to this report, residents are "trashing" their environment statewide without regard to aesthetic and environmental concerns.

STATE: Maine (Marine)

CONTACT: Elaine Jones

Department of Marine Resources has not had an angler education program, but is in the process of developing one. Ethics, however, is incorporated in their Marine Invertebrates and Water Quality program to teach concern for the environment, species management, preservation, catch-and-release, obeyance of laws and regulations. Their program trains elementary and secondary education teachers who are asked to evaluate the effectiveness of the Maine Marine Studies curriculum.

The state has a particular need to educate certain coastal groups about conservation ethics. In addition, cultural and survival practices make it difficult to influence Maine's migrant population. Seasonal influxes of tourists also pose a problem in that they are often uninformed about state laws and regulations. No salt water fishing license is required.

STATE: Maine (Freshwater)

CONTACT: Lisa Kane

While there is not an aquatic education program in Maine per se, their Project Wild Coordinator affirms its incorporation within the program context through the indirect discussion/presentation of ethics to encourage responsible use of the resource. Another objective is to clarify the relationship between habitat and wildlife.

Dilemma cards, role playing and hands-on activities are methods used to incorporate the teaching of ethics. All Project Wild participants are asked to complete evaluation forms and are provided follow-up information via a newsletter produced three times a year. Maine has done only one formal survey to determine how Project Wild materials were being used in the classroom. They were pleased with the quality of responses though disappointed at the low number of responses received.

Maine does not feel there are any specific angler ethics problems they need to address with their program.

STATE: Maryland

CONTACT: Cindy Grove

DNR runs summer fishing clinics, using an aquatic resource education curriculum, Aquatic Wild, and the *Sport Fishing and Aquatic Resource* handbook. They offer clinics by appointment during the remainder of the year.

Their program was evaluated in 1989 and 1990, primarily a survey of children who participated in the clinics. They have no specific angler ethics problems in Maryland that are not addressed in their program.

STATE: Massachusetts

CONTACT: Gary Zima

The Division of Fisheries and Wildlife addresses ethics as part of a four-week class for people of all ages on basic freshwater fishing. Classes are advertised through volunteers and 20-30 are held each year. One night is devoted to safety and ethics in which law enforcement and how to be a responsible sportsperson are addressed.

Ethics topics covered include picking up trash, asking permission and closing gates. Instructors lecture and pass out handouts. The highlight of the class, however, is a skit involving a landowner and both good and not-so-good examples of anglers. The anglers display both positive and negative behaviors as they fish. The result is that the landowner kicks them all off his property and posts "No Trespassing" signs. The class then discusses the skit and the behaviors.

The course is evaluated on the fourth night by having students fill out a simple evaluation form with check-off answers. There is no question on ethics, however.

Staff report that litter and pollution are the problems that kids are most concerned about.

STATE: Michigan

CONTACT: Dr. Ned Fogle

Michigan's angler education program incorporates ethics to stress the importance of respecting the rights of others, to teach respect for the resource and to practice *proper* catch-and-release. Fishing clinics provide instruction such as species identification and how to handle fish that are not kept for consumption. Participants are also informed that it's all right to keep fish to eat. Dr. Fogle believes that youngsters learn by example and that it's important to start them off by teaching the proper way to fish.

Michigan angler education emphasizes the necessity of regulations to protect the resource. Surprisingly, many people aren't aware of issues related to angler ethics, i.e., being mindful of another angler's space.

STATE: Minnesota

CONTACT: Linda Erickson-Eastwood

The Minnesota Department of Natural Resources addresses ethics as part of its statewide MinnAqua program by showing videos, role playing situations in which decisions must be made and discussing the subject. The youth participating in their programs enjoy the role playing most, according to Linda Erickson-Eastwood. The role plays address stewardship or taking care of the environment, how to treat others and whether or not the students would break the laws. Students also receive an ethics card.

The program is evaluated with pre/post testing and has shown that there is a small increase in correct answers after students have taken the course. Evaluation of instructors appears to be based largely on personality. Long-term evaluation may be possible if the Department can follow students from fourth through sixth grade and meet with groups each year.

The Minnesota program plans to address fishing ethics as it relates to other cultures. Initial efforts will concentrate on bringing about a better understanding of Native Americans and Southeast Asians.

STATE: Mississippi

CONTACT: Martha Cooper

The Department of Wildlife, Fisheries and Parks addresses ethics throughout its angler education program, emphasizing both resource and behavior concerns. While regulations are covered, students are encouraged to do more than just obey the law. They are admonished to look at the resource as a whole and protect it. Mostly youth, grades 3-7, participate in the program. Students visit state park lakes where they discuss the food chain, look at the habitat, learn about safe use of equipment and go fishing. Evaluation forms are sent to parents to find out what their children said about the program and to ask parents if they want to take their family fishing. Students are interviewed to find out if they had fun, what they learned and if they will pass it on to their families. The interviews have resulted in some interesting information, including kids relating examples of family members who have not observed the rules.

The Mississippi Museum of Natural Science offers two aquatic outreach programs: "Inland Waves" and "WET Mississippi." These programs are available for first through sixth grades and involve a 45-60 minute presentation which actively involves the students. Follow-up surveys are sent to the school or organization using either of these programs.

STATE: Missouri

CONTACT: Cindy Borgwordt

Missouri's ethics education objectives include helping people to become more conservation oriented; to appreciate natural resources; to fish properly; and to reduce litter, noise and pollution. Chapters on ethics are included in the S.P.O.R.T. manual, and ethics and behavior are discussed extensively in the S.P.O.R.T. education sessions. Publications such as the pamphlet *A Guide to Trout Stream Ethics* are provided to the public. Department personnel act as role models.

There has been no evaluation of the ethics component of Missouri's aquatic education program.

The main ethics problems in Missouri include slob anglers, litter, trampling sensitive vegetation, and dealing with urban fishing pressures, both social and resource-oriented.

STATE: Montana

CONTACT: Kurt Cunningham

The Montana Department of Fish, Wildlife and Parks is just starting an aquatic resource education program. The need for teaching ethics has been mentioned as they have conducted a needs assessment. Objectives they see as being important to cover include water safety, ethics as they pertain to issues of the state, skills, ecology and biology. Workshops taught by certified instructors will be offered to youth and adults.

Fishing problems encountered in Montana include transporting and illegally stocking desired species in certain waters, catch-and-release, tournament and competitive fishing, and fishing groups pushing their own interests rather than working together.

STATE: Nebraska

CONTACT: Darrell Feit

Nebraska includes ethics in its aquatic education program through videos, instructor training, fishing clinics, curriculum materials distributed to elementary schools, and Aquatic WILD activities. The video, "Grandpa, Can We Go Fishing?" includes a strong ethical message, and this video is now being adopted by many states in the U.S.

Nebraska's objectives include building a better future for the resource, promoting catch and release, caring for the environment, and providing more enjoyment for all.

Nebraska has done no formal evaluation of its ethics objectives.

The most important angling ethics issue faced in Nebraska is promoting a catch-and-release attitude.

STATE: Nevada

CONTACT: Kim Toulouse

Nevada's ethics education objectives include reducing impacts on overused waters, increasing use of underused waters, informing and educating about special regulations, and stressing the need for catch and release. Eight-hour fishing clinics, which cover the need for rules and regulations, and proper fish identification are Nevada's primary means of reaching ethics objectives. Included in the discussion are the impacts on wading in streams. "The Way of a Trout" is shown and used to model good behavior.

Participants fill out an evaluation at each clinic. Clinics are modified if necessary to meet needs and demands. Nevada maintains the list of clinic participants to determine if juveniles purchase a license when reaching the appropriate age.

Ethics problems in Nevada include promoting catch and release, catching more than a limit, littering, and compliance with special regulations.

STATE: New Hampshire

CONTACT: Kelle MacKenzie

New Hampshire views ethics education as a valuable and important part of that state's aquatic education efforts. Ethics objectives include creating a citizenry that is aware of its impacts and effects on the environment; promoting responsible use of the resource; promoting catch-and-release if fish are not eaten; promoting positive relations with others while fishing; understanding impacts on wildlife (such as nesting loons); understanding the differences between privileges and rights, and the law and ethics; and reducing litter and pollution.

New Hampshire's focus is on clinics and workshops, where instructors use dilemma scenarios, role plays and skits to illustrate ethical behaviors and initiate discussion. Conservation officers also do presentations on ethics. Currently the ethics component is not being evaluated.

Ethics problems in New Hampshire include landowner relations; anglers taking too many fish, both over the limit and just plain being a fish hog; understanding the rationale for catch-and-release; and understanding size limit regulations such as for stripers.

STATE: New Jersey

CONTACT: Paul Tarlowe

New Jersey's ethics education seeks to put responsible, ethical sportsmen in the field; promote courteous behavior toward fellow sportsmen; and protect the resource. New Jersey attempts to make progress toward these objectives through offering two-hour fishing education sessions at state hatcheries. One hour is devoted to lecture and a part of the class focuses on discussing ethics, and uses a Socratic (teacher poses question) approach if possible. Currently there is no evaluation of ethics taking place.

Ethics problems in New Jersey that need addressing include a poor image of anglers because of their litter and noncompliance with special regulations.

STATE: New Mexico

CONTACT: Ti Piper

New Mexico's ethics objectives include meeting ethics education field goals identified by local conservation officers, changing attitudes toward the environment, and recruiting more conservation-minded anglers.

In New Mexico youngsters are asked to define their own ethical behavior, and to write it down during classroom presentations. "They learn much better when they discover it for themselves. You can't tell them what to do," says Aquatic Education Coordinator Ti Piper. Conservation officers do skits enacting good/bad angler behavior. Youngsters ask questions about ethics.

New Mexico uses input from field staff and conservation officers to identify local problems specific to that area. Ethics education is then focused on specific local problems.

Evaluation is accomplished through feedback from conservation officers on whether or not local problems are being reduced. New Mexico expects to see results on a longer term basis.

Ethics problems in New Mexico include fishing without a license; alcohol abuse while fishing; parents setting bad examples for kids; identifying those who trash the environment and working on an attitude adjustment; litter; and animal rights issues such as anthropomorphizing fish.

STATE: New York

CONTACT: Bruce Matthews

New York sees angling ethics education as central to its aquatic education mission. Angling ethics objectives include developing a new generation of New York anglers who believe it feels good to fish "right;" establishing youth groups in communities and neighborhoods around the state that share a common commitment to fishing ethically; developing a cadre of instructors skilled in ethics education to lead community clubs and apprentice-mentor programs; and creating a critical mass of ethically competent anglers positioned to lead New York's outdoorsmen and women in the 21st Century.

New York uses trained and certified instructors to guide community clubs in developing group skills in critical thinking and decision-making, leading to group consensus on a code for ethical angling behavior. Methods used include dilemma scenarios, discussion, role playing and skits, observation and consensus-building over time, focused on developing and refining a group code of ethics. New York stresses the need for long-term involvement with a club or mentor to maximize potential for developing ethical behavior.

Though extensive evaluation is planned, at this point evaluation has been limited to instructor feedback on ethics training methods and outcomes (which is consistently rated very highly), and a survey of instructors to determine how many were teaching ethics and the percentage of club time being spent on ethics. Interestingly, about 18 percent of available time is spent on ethics education activities.

Ethics problems in New York include illegal snagging; overuse of certain areas; lack of streamside courtesy; differing (and sometimes conflicting) cultural expectations for fishing experience; ignorance of and lack of skill in what fishing methods are successful, leading to the use of illegal/unethical practices; dealing with the catch-and-release issue, incorporating sound ecology and logic with angler feelings about releasing fish; and dealing with the issue of health advisories and public education about fish and fishing in contaminated waters.

STATE: North Carolina
CONTACT: Randy Cotton, Celeste Wescott

North Carolina's angling education program focuses on ethics in a number of ways. The primary objectives include promoting an understanding that ethics is not just being considerate of others, it is understanding that all things are connected.

North Carolina offers training and/or certification for educators and youth leaders to use the N.C. CATCH materials and activities. Approximately one hour of a 6-to 10-hour training course is devoted to ethics. Unit Two in the CATCH Instructor's Guide and CATCH Student Handbook is entitled "Conservation and Outdoor Ethics," and includes activities focused on litter, pollution, loss of habitat, species loss, trespassing, ethical dilemmas and the "Enviro-Ethics" activity from Project WILD. A Fisherman's Code of Ethics is featured on the back of the student handbook, and students are directed to it in a number of activities.

At this point there has been no formal evaluation of the ethics education component.

Two of the ethics issues stressed in North Carolina are litter by boaters and anglers and habitat loss.

STATE: North Dakota
CONTACT: David Jensen

North Dakota's angler ethics objectives focus on helping people understand that the number of fish is not as important as the quality of the experience. Teaching catch-and-release is also a goal. To accomplish this, North Dakota uses Pathway to Fishing, Project WILD and fishing clinics, which pass out rules and regulations and teach fish release techniques.

To evaluate, North Dakota conducts a survey of teachers. The survey covers ethics, but not specifically angling ethics.

Ethics problems in North Dakota include dumping bait buckets, thus introducing exotic species; catching over the limit; promoting catch-and-release; and litter.

STATE: Ohio
CONTACT: Jim Wentz

Ohio attempts to integrate ethics into all aspects of its angling education effort. The main avenues for getting the angling ethics message out in Ohio include working with municipal parks and recreation programs in the 12 most populated counties; exhibits at zoos, fairs and museums; publications targeting fishing groups; Hooked on Fishing-Not on Drugs; place mats for kids, emphasizing responsible use of the resource; and films and lectures. Ohio uses the AFTMA manual, including the chapter on good angling behavior. They also do an activity with youngsters involving developing personal codes of ethics on a form called "My Fishing Code."

Objectives for the Ohio Program include changing behaviors, such as reducing litter, and instilling a respect for the resource, for private and public property, and the rights of others; and cultivating a code of ethics and responsibility among anglers and other users of aquatic resources.

Though Ohio is actively involved in evaluating hunter education courses, at this point they have not conducted an evaluation of angler ethics education.

Specific problems in Ohio include littering, greed (keeping more than a limit), and lack of respect for other users.

STATE: Oklahoma
CONTACT: Colin Berg

Oklahoma uses trained volunteers to run fishing clinics, which are similar to the Pathway to Fishing station approach. The Sport Fishing Institute Angler Ethics Code is featured. Instructors act as role models, giving lectures and doing role plays. One station sets out examples of litter and asks "what's wrong with this picture?"

Oklahoma's ethics education objectives include developing a sense of stewardship for the future, and promoting ethical sportfishing.

Informal evaluation strategies are used. For example, instructors are asked to see if any litter is left after the clinic, but at this point the evaluation has not been formalized.

Specific Oklahoma ethics problems include littering, abiding by conservation regulations, promoting catch-and-release, respecting property owners, and supporting conservation efforts.

STATE: Oregon

CONTACT: Bill Hastie

Oregon's Department of Fish and Wildlife integrates the teaching of ethics into all aspects of their aquatic education program. Hoping to improve behavior of Oregonians using the state's natural resources and to halt some damaging and illegal practices particular to the northwest such as snagging or foul-hooking fish, aquatic educators and instructors are concentrating on the next generation of anglers. To stress the importance of obeying state regulations and why they are needed, youngsters are encouraged to develop and share a personal code of ethics as they proceed through the program. Dilemma cards similar to Project WILD's teach stewardship, respect for the resource and angler etiquette. A section of the state manual called "Giving Something Back to Fish" advocates being a "voice for fish", inviting youngsters to become peer spokespersons for the resource.

Due to the unavailability of funds and personnel, no formal evaluation has been done. Ideally, development of a five-year plan would help to evaluate the effectiveness of Oregon's program, though an informal poll of instructors has resulted in wide agreement that course participation by adults and youngsters has produced satisfactory results. Oregon is planning to begin an evaluation of the program soon.

STATE: Pennsylvania

CONTACT: Carl Richardson, Kim Mumper

Pennsylvania uses an approach of training volunteer fishing skills instructors, who conduct local fishing clinics and courses. The curriculum for this program includes angling ethics. The objectives are to simply get people thinking about ethics in relation to fishing, to teach good outdoor manners, and to develop respect for the resource and other resource users.

The instructors are trained to use ethics education techniques such as Project WILD's Enviro-Ethics activity, ethical dilemma scenarios, and leading discussions on ethics. No evaluation specific to ethics has been done.

The usual ethics issues affect Pennsylvania's anglers. One of the most important is lack of respect for landowners, which leads to more posting and limiting of access.

STATE: Rhode Island

CONTACT: Chris Dudley

Ethics is addressed in Rhode Island through programs such as educational clinics and the Hooked on Fishing-Not on Drugs program. Trained volunteer facilitators and instructors promote angling ethics by setting a good example and being role models, and offering lectures and educational materials incorporating ethical concepts. Rhode Island's objectives include promoting catch-and-release—assuring that fish are not wasted; showing respect for the fish; avoiding trespassing by asking permission; picking up litter—your own and that left by others; preserving the aquatic resource and developing a new, more environmentally ethical citizenry.

Though no formal evaluation of ethics education has been conducted, informal observations reported by instructors indicate positive results.

The most important ethical issues facing Rhode Island include littering, reaching adult offenders, reaching non-anglo communities having different cultural values, and getting more people involved with both reporting violations and adopting public aquatic resources.

STATE: South Carolina

CONTACT: Don Winslow

Though South Carolina is not directly addressing angler ethics on a statewide basis through the Wildlife Department, some programs are including it. Clinics, Hooked on Fishing-Not on Drugs programs, fishing rodeos and Aquatic WILD programs all may address ethics, depending on the instructor teaching it. No program of evaluation for ethics education exists at present.

Ethics priorities for South Carolina include promoting catch-and-release and putting the habitat first. Angler ethics problems include a lack of a sense of stewardship for water resources, and littering.

STATE: South Dakota

CONTACT: Steven Kirsch

South Dakota says that angling ethics is not a primary focus in their program. The aquatic education component is composed of a number of diffuse elements, but does include Aquatic WILD, and an ethics message. The objectives of this effort include gaining compliance with rules and regulations, understanding the rationale for regulations, protecting the resource and understanding why ethics are important.

South Dakota has not evaluated the ethics segment of aquatic education and has no serious ethics problems or issues the agency needs to address.

STATE: Tennessee

CONTACT: Deborah Patton

Tennessee's aquatic education program is just getting started and is primarily focused on doing pollution clinics and free fishing days. The program plans to address angler education soon and will focus on the objectives of teaching responsibility by abiding by laws and promoting stewardship of the resource. Catch-and-release will be addressed, as well as taking care of the water that provides the food source. Methods planned include media events such as free fishing days, sponsoring the "Becoming an Outdoors-Woman" program, outreach to scouts and urban groups, correlating with the state education curriculum, using the AFTMA manual and getting kids out to experience fishing and the resource first-hand.

Though the program is too new to evaluate, Tennessee has been tracking the numbers of AFTMA manuals distributed, and is planning a survey.

The biggest ethics problems faced in Tennessee are anglers not abiding by the regulations.

STATE: Texas

CONTACT: Steve Hall

Texas includes a strong emphasis on ethics in its aquatic education efforts, patterning it after hunter education. Texas hopes to improve angler behavior and increase angler awareness of what is right and wrong, and the consequences of their behavior.

Texas teaches aquatic education through operating clinics, Pathway to Fishing programs and incorporating it into the curriculum of a high school course. With these approaches, Texas trains its instructors to use methods and activities such as dilemma discussions, environmental cleanups, incorporating Project WILD activities, and discussions on responsible/irresponsible behavior. Texas would like to develop an angling ethics trigger film similar to those used in hunter education.

At this point Texas has not done an evaluation of its angler ethics education efforts.

Specific ethics issues of concern to Texas include the elimination of the concept of "trash fish," the need to respect the resource, and littering.

STATE: Utah

CONTACT: Phil Douglass

The Utah Department of Natural Resources has completed an aquatic education needs assessment and is now developing programs. Ethics were defined as one of the top three topics in the needs assessment surveys of Utah. Consequently, ethics will be a priority message in Utah's Aquatic Education programs. Their aquatic education programs consist of: Adopt-A-Stream, responsible angling programs, leadership training for scouts (and other conservation groups), and hatchery education. Problems to be addressed in these programs include litter, pollution, trespass, environmental degradation and fish kills.

STATE: Vermont
CONTACT: Mark Scott

Vermont's main means of reaching youth with an ethics message is through their week-long conservation camp. Youth 12-14 participate in hands-on outdoor and environmental education activities, which cover ethical points such as catch-and-release, fish identification and appropriate fish release methods. Vermont's objectives are to promote responsibility toward the resource as well as to other people. To do this, Vermont emphasizes acquiring content knowledge, critical-thinking skills, knowledge of biological and ecological skills, and developing good sportsmanship.

The only evaluation done at this point is an evaluation of camp enrollment trends.

STATE: Virgin Islands
CONTACT: Ralf Boulon, Jr.

The Department of Planning and Natural Resources stresses angler ethics to promote the protection of already degraded marine habitats and fisheries resources, and to make resource users understand the plight of their natural resources, i.e., what the consequences are and how residents can assist in protecting, enhancing or restoring them. Brochures and posters related to recreational fishing illustrate the ethics of catch-and-release, catch limitations, responsible vessel operation, bringing trash to shore and protecting fisheries habitat. The Virgin Islands has oriented their aquatic resource education program towards habitat and discussion of environmental issues primarily through video, slide and school presentations.

Though they have done no formal evaluation, the level of concern in protecting natural resources is increasing as evidenced by letters and calls from all segments of the population. Environmental issues are more frequently dealt with in the media, but the department feels that its efforts have helped more people consider the consequences of their actions, although litter, limiting the catch, as well as many other ethical issues need to continually be addressed.

STATE: Virginia
CONTACT: Anne Skalski

Virginia includes ethics in their aquatic education efforts in a number of arenas. A new course has been designed for physical education teachers that includes a chapter on ethics. Teachers are trained in how to affect attitudes; how to encourage active student involvement in their ethics education, helping them choose teaching methods most likely to succeed. One method is through fishing clinics, often designed and conducted by local organizations. Virginia encourages these organizations to include ethics in their programs.

Virginia's ethics objectives include the teaching of proper behavior by inspiring students to behave according to a code of conduct and develop a conservation ethic that includes respect for the resource, others and oneself.

Though no formal evaluation of ethics education has taken place, the clinics report success. Potential exists for conducting longitudinal studies looking at changes in the numbers of violations given for such things as litter as an indicator of ethics education success.

Virginia's ethics problems include litter, crowding, negative interactions between boaters and anglers, and a "big fish" mentality as the main indicator of angling success.

STATE: Washington (Marine)
CONTACT: Rich Kolb, Donna Van Kirk

Washington promotes angling ethics through publications and by encouraging teachers to include it in the curriculum. Publications include catch-and-release handouts, boating and water safety pamphlets, and the Future 21 (angling ethics code) stickers. Teachers are asked to brainstorm five behavioral rules with their students.

Washington hopes to have anglers understand the rationale behind catch-and-release, show respect for the natural environment, understand that you don't need to own the environment in order to care for it, and to be internally motivated to act ethically.

Though no formal evaluation has been done, after going through a program youngsters have been observed returning fish and picking up litter.

Angler ethics problems needing to be addressed in Washington include saving salmonid runs and showing respect for all species (eliminating "trash" fish syndrome).

STATE: Washington (Freshwater)

CONTACT: Mike O'Malley

Washington's angler education program trains volunteer instructors who conduct fishing clinics with courses of one-hour duration up to a three-month intensive program. According to O'Malley, "Most instructors volunteer because of their concern for ethics." Using mostly lecture approaches based on the AFTMA and Outdoor Empire manuals, instructors focus on ethics for part of the program.

Washington's ethics education objectives include helping people understand that they share the resource, that ethics are relative and subject to individual interpretation, and that respect is the key concept.

No evaluation of ethics has been done.

Washington's ethics problems include littering (particularly styrofoam bait containers); conflicts between bank fishermen and wading or boating anglers; keeping anglers abreast of new laws and regulations; catch-and-release, especially with endangered species; releasing fish properly; and matching expectations with reality.

STATE: West Virginia

CONTACT: Art Shomo

West Virginia does not specifically address angling ethics on a statewide basis in an aquatic education program. Some regional biologists conduct fishing clinics locally. They use the AFTMA Sportfishing and Aquatic Education Handbook, review the ethics section, which focuses on a code, review laws and discuss catch-and-release. The degree to which ethics is emphasized is up to individual instructors. There has been no evaluation of the ethics education program.

Overall, West Virginia feels that greater compliance with the law, more respect for the resource, and valuing fish and wildlife beyond their usefulness to humans are important ethics education objectives. Specific ethics problems in West Virginia include following stocking trucks (causes poor angler behavior and poor public perceptions of anglers) and catching more than a legal limit of fishes.

STATE: Wisconsin

CONTACT: Carole Lee, Theresa Stabo

Wisconsin weaves ethics throughout its entire aquatic education program. "Everything we do reflects our ethics emphasis," states Carole Lee. Wisconsin trains volunteer instructors to teach youth how to fish through a six-hour course. The instructor's manual addresses fishing responsibly, being a "good sport," avoiding conflicts, abiding by the regulations, and providing a "Good Angler's Code." The manual suggests that instructors spend 10 to 15 minutes on these topics in the six-hour course.

Wisconsin's ethics objectives include conserving and respecting the resource, respecting both people and the environment and preserving the resource for the future.

Wisconsin is evaluating its entire program this year beginning with a series of focus group sessions with volunteer instructors.

STATE: Wyoming

CONTACT: Jake Hohl

In Wyoming little formal angling ethics education is being done currently by the Department. Approximately $6,000 is used to purchase guides and equipment and this is donated to Trout Unlimited and cooperative programs such as the USFS for clinics and derbies. The main avenue for disseminating ethics material is through Project Aquatic WILD, the AFTMA Fishing Education Manual, derbies, clinics and fishing days. At this point there has been no evaluation of ethics education.

In Wyoming, the main ethics-related problem occurs with conflicts between resident and non-resident anglers. "Wyoming's small population and large land area reduces most problems," Hohl states.

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Advantages/Disadvantages of Evaluation Models

MODEL	ADVANTAGES	DISADVANTAGES
CASE STUDY (Stevenson 1985)	Gathers intensive information from each stage of the program Considers the experiences of the individuals	Time-consuming Small sample may not provide representative information
CIPP (Context, Input, Process, Product) (Guba & Lincoln 1985)	Comprehensive Provides information for decision makers	Time-consuming Complex
DIALECTIC (Henderson 1991)	Yields information from many viewpoints	Requires a large evaluation team
EXPERT OPINION (Eisner 1979)	Offers different perspectives and insights	Relies only on the judgment of one or a few people
GOAL-FREE (Scriven 1974)	Addresses all of the program's effects	Evaluator must be trained and understand personal biases
GOAL ATTAINMENT (Tyler 1950)	Focused on specific questions	Ignores processes and unintended effects
IMPORTANCE/ PERFORMANCE (Henderson 1992)	Prioritizes needs	Discrepancy between needs may be difficult since most program elements are seen as important
MATRIX (Stake 1972)	Comprehensive Structured	Complex and demanding
NATURALISTIC (Guba & Lincoln 1985)	Considers multiple influences Studies the entire environment	Time-consuming Unfocused Results may not be trusted
QUASI-EXPERIMENTAL (Campbell & Stanely 1963)	Yields "hard" objective data Well-researched techniques are available Intense study of one aspect of program	Results may be artificial Requires a controlled atmosphere May ignore the effects of multiple influences
RESPONSIVE (Guba & Lincoln 1985)	Provides for the evaluation audiences' needs	Requires knowledge of numerous evaluation techniques

credit: Martin et. al. 1994

Evaluation Tools and Matrix

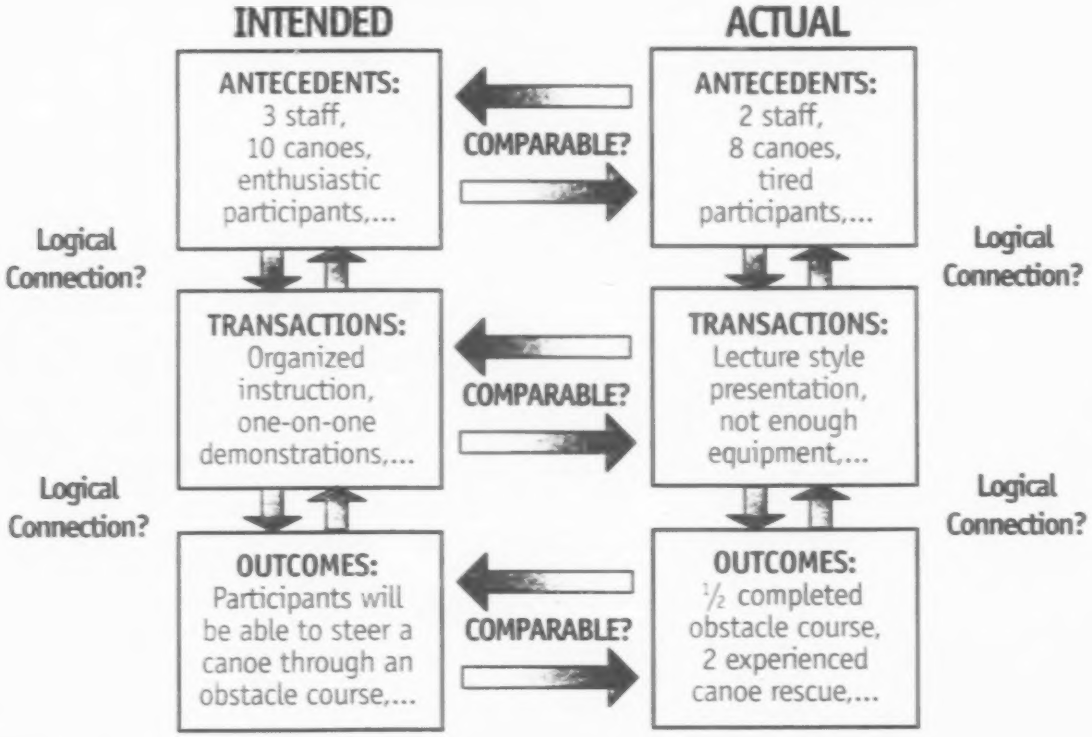
Matrix

Some models use matrices to build a framework for their evaluation. To better understand a program, we can think of it as several parts put together in a series. A program may consist of: (1) antecedents (staff training, materials, initial attitudes of participants, etc.), (2) transactions (teaching methods, activities, interactions among students, etc.), and (3) outcomes (knowledge learned, damage to equipment, lasting impressions, etc.). An example of part of a matrix is given in the figure below. If you were using this matrix to evaluate a canoeing activity, you could first describe the *expected* inputs, processes, and outcomes. You could compare how these fit together. (Is it logical to expect participants to learn the skills from the planned activities?). Then you could observe and describe the *actual* inputs, processes, and outcomes. You could then consider whether or not the actual connections were logical. Finally, through comparing the *expected* to the *actual* inputs, processes, and outcomes, you could discover where the program is not meeting the expectations. Matrices may be excellent for guiding your evaluation. However, be aware that a matrix may act as a blinder if it is too narrowly focused. Matrices such as this can be very helpful in providing a thorough approach to program evaluation.

References:

Stake, R. (1972). The countenance of educational evaluation. In D.M. Cowley & P.A. Taylor (Eds.), *Readings in Curriculum Evaluation* (pp. 93-102). Dubuque, IA: WM. C. Brown.

Example of a Matrix for the Evaluation of a Canoeing Activity


INTENDED
ACTUAL
ANTECEDENTS:
3 staff,
10 canoes,
enthusiastic
participants,...
COMPARABLE?
ANTECEDENTS:
2 staff,
8 canoes,
tired
participants,...
Logical
Connection?
Logical
Connection?
TRANSACTIONS:
Organized
instruction,
one-on-one
demonstrations,...
COMPARABLE?
TRANSACTIONS:
Lecture style
presentation,
not enough
equipment,...
Logical
Connection?
Logical
Connection?
OUTCOMES:
Participants will
be able to steer a
canoe through an
obstacle course,...
COMPARABLE?
OUTCOMES:
½ completed
obstacle course,
2 experienced
canoe rescue,...

credit: Martin et. al. 1994

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E

Developing a Trigger Film Worksheet

by Bob Jackson

Work Sheet for Scripting and Developing a Trigger Film Production

What is the nature of one very real and important problem facing hunters and hunting in your state? Why is it so important? Briefly describe it.

Illustrate how this problem occurs in the field (or home) by three different situations. (Different kinds of hunting, etc.)

1.

2.

3.

Where are the key, *decision making* moments in each of these three situations? (At what points do the hunters have to make choices which define their being responsible or not?)

1.

2.

3.

As a group, settle on the **one** best or most interesting situation or dilemma. Talk through and then list the options or alternatives available to the hunters at this moment of choice.

1.

2.

3.

Discuss the rationalizations, explanations, and thought processes (dialogue) that often occur as the individual makes that decision. (Other hunters are doing it: If I don't shoot now...etc.) Jot these down as potential key lines that could be used by the actors.

Now roughly outline a sequence of events (a "loose" script) which would lead up to the moment of choice. Be sure to include the actions, positions and values of each character. In a phrase or two, outline the basic attitude and value structure of each of these characters as individuals. Where are they coming from in terms of life histories, age, previous experience, etc.?

Go back over the script outline and insert the key lines and ideas for dialogue that were listed and insert them into the script. Don't worry about whole sentences. These will be improvised. Just list the key phrases or ideas that need to he expressed by certain characters and at certain places.

Dress rehearse with your group.

✓ Checklist:

☐ Keep cast small (2 to 4 people)

☐ Assume that you will have only one camera and that it will be on a tripod. Can you account for all the action in a continuous flow from that one camera location?

☐ Interruptions, flubbed speeches, and other occurrences are normal! They will probably add to the spontaneity of the product.

☐ Be sure there is a real choice or choices (dilemma) which develops at the exact end of the script.

☐ Cut before the characters make their choices.

☐ Only one dilemma per episode. Decide what is your primary objective (priority) and don't dirty it up with other choices.

☐ Don't worry about sloppy gun handling. It may create an excellent teaching situation later. The group can review the film with a challenge to spot the unsafe gun handling.

Using the Dilemma Method *by Bob Jackson*

The Dilemma Method

Introduction

Hunting is a controversial issue. The majority of the non-hunting public is unfamiliar with the fact that wildlife, as well as other natural resources, is renewable. They do not understand the importance of the role of regulated hunting and trapping in wildlife management and conservation.

Novice hunters must learn that they have a responsibility to the resource, landowners, the general public and to other hunters, to hunt in a responsible and ethical manner. It is important for them to know that their actions are a reflection on the abilities and ethics of all hunters.

As an instructor, you should be concerned with providing information and teaching students to evaluate situations so they can make safe and reasonable decisions and to behave responsibly while hunting. Make your students aware of how their personal behavior affects others.

The following instructional methods and dilemma situations can be incorporated into your classroom sessions to help your students develop a sense for responsible hunting behavior. In discussing the dilemmas here, students will form their own code of ethics.

Planning for Student Learning

There are three needs Hunter Education students have:

1. The *knowledge* required to be a totally responsible hunter and safely perform hunting and shooting activities.
2. The *skill* sufficient to responsibly and safely perform hunting and shooting activities.
3. The *attitude* required to understand, actively support and set examples of responsible and safe hunter behavior.

Knowledge. Sharing knowledge is a major role for instructors. Transferring an idea from the hunter education manual through your mind into the minds of your students is a challenging task. Do not underestimate it.

Your preparation to accomplish that unique task is important to its success and to the success of your students.

Your preparation should include the following:

1. Study the lesson plans and references well in advance of the class. Rehearse if necessary.
2. Prepare and practice with your training aids to insure your ideas are shared effectively.
3. Check all equipment, lights, etc. Have them ready for class to start on time.

Skill. The teaching of skills is sometimes frustrating, but always rewarding. Sharing ideas imparts knowledge, but sharing skills puts that knowledge into action.

As an instructor, you are teaching by your every action. Your example is the key learning experiences for most of your students. Be aware of how you "come across." Be careful to handle all firearms properly and safely. Properly hold, carry, aim, and fire them, etc. What your students see you do, they automatically think is okay for them to do.

When you are aware that you are doing things correctly, you will find it is easier to share those skills with others.

Tell your student how to do something, *show* them how to do it, *help them do it*, and *evaluate their ability* to do it. Help them until they do it right.

Have students work in pairs or teams to aid them in learning skills and observing others perform skills.

Attitudes. Sharing your knowledge and the Hunter Education course information, your skills and the skills included in the course, are very important to the future of your young hunters and the sport of hunting. However, sharing a positive, favorable attitude may be the major factor in the success of your Hunter Education courses. Be aware of the attitude you project to your students.

Attitudes are least understood and most difficult to influence or modify. Simply stated, an attitude is the way a person feels about something.

Knowledge alone cannot assure a favorable attitude.

Student behavior often reflects their attitudes. Understanding, compassion, and a demonstrated willingness to help will improve negative or improper student attitudes.

1. *Each student needs to belong.* A person who feels he or she is a contributing member of the group will develop desirable attitudes toward group objectives, which are hunter safety and responsibility in this case. Peer group pressure is a powerful attitude changing tool. Learn to use it effectively.
2. *Each student needs to feel trusted and secure.* A person who feels trusted and secure within the group will strive to reach the group's mutual objectives.
3. *Each student needs self-esteem.* A person who feels respected by other group members will go along with group objectives.

Consciously try to develop a team spirit in your class or group. If you are successful in making the class members feel they are part of an important dedicated effort to protect themselves and the future of hunting, they will be more likely to develop positive and sharing attitudes.

Assist students in developing group objectives for the course and for their individual lifetime of hunting. Help them understand realistic hunting expectations, i.e.,

1. Hunting is always good—only the bagging varies.
2. Just going hunting is great sport—bagging game is a bonus.
3. All bowlers do not bowl 300, all batters do not bat 1,000, all hunters do not bag game.

Help them set hunting goals that will provide self satisfaction and rewards for a lifetime.

Instruction Methods

There are many ways to present a topic to a classroom, and, depending on the topic, some are more effective than others. Before exploring the dilemma method, review these basic methods:

Audio-Visual Aids: The supplementation of learning through the senses of seeing, hearing, and/or feeling and often used simultaneously with verbal presentation by the teachers.

Examples: bulletin boards, charts, collections, exhibits, filmstrips, flannel boards, maps, mockups, models, motion picture, puppets, recordings, slides, television and others.

Brainstorming: The division of the class into groups to present possible solutions to a problem. No negative statement may be made, only positive answers, and the recorder writes down all that is said. No moderation is deemed necessary. Intriguing method that stimulates thinking about individual expression.

Debate: The division of the class into equal groups of from four to eight members each representing opposite viewpoints regarding a question. Each participant is allowed an individual presentation and rebuttal following a limited preparation period. Stimulates thinking, organization and expression in a structural experience.

Demonstration: The process of presentation by the teacher in front of the class in order to illustrate a principle, show a technique, or establish certain facts. Usually used to supplement a presentation and facilitate learning and understanding.

Discussion: Student oral participation toward the resolution of a problem or question. Discussion may proceed with or without active teacher direction but ordinarily employs some degree of moderation to guide the thinking of the group. Allows clarification of certain aspects of a presentation and stimulates thinking and expression.

Drill: The repetitive practice of fundamental knowledge or skill intended to bring about automatic response or performance in a subject not necessarily mechanical or uninteresting. Can be functionally used in conjunction with other procedures for subject matter or behavior understanding.

Field Trips: An excursion planned by the student and/or teacher undertaken for educational purposes in order to observe and study materials and processes in their functional setting.

Games: The participation by class members in activities which constitute and establish a coercive learning situation through creation of favorable emotional appeal. Promotes desirable outcomes by creating an atmosphere conducive to participation.

Lecture: An attempt to impart knowledge to create interest, influence opinion, stimulate activity, or promote critical thinking by the use of verbal language with little student participation.

Lecture-Discussion: A composite presentation utilizing both the lecture and discussion techniques, incorporates desirable qualities of lecture and discussion when functionally utilized.

Outside Speaker: The utilization of a well informed specialist from the community to talk or discuss with the students some relevant issue or subject about which he is an expert. Excellent method of obtaining information and insure understanding from a practical viewpoint.

Reading Assignments: The delegation of supplemental education materials to further the student's understanding of a particular topic or part of work. Promotes and stimulates thinking or understanding by exposure to other views and opinions when properly utilized.

Review: A re-examination of material previously presented. Encourages critical thinking, constructive analysis and general comprehension.

Role-Playing: A spontaneous, unrehearsed and on-the-spot acting out of a problem or situation by selected students and presented before the group to stimulate interest, thinking, and interpretation or to provide a common basis for discussion. Excellent functional approach to referring knowledge, attitude or behavior concerning a problem.

Skit: A rehearsed and planned dramatization of a situation by students and presented before the group to stimulate interest, discussion or interpretation. Provides information in a unique manner and particularly effective in influencing attitude concerning a situation or problem.

Tests: A device or procedure utilized to measure knowledge, attitude, interest, ability, achievement or behavior, constructed by the teacher or pupil. Self-tests help to stimulate interest, motivate and cement student-teacher understanding.

The Dilemma Method

One of the major responsibilities of instructors is to put the most responsible, ethical hunters afield possible. The behavior demonstrated by today's hunters will, to a large degree, determine if the sport is to survive. For that reason, new, innovative teaching methods emphasizing student involvement are needed. The goal is to instill in the student a keen awareness, a higher level of moral reasoning and hopefully, a better understanding of his role as a sportsman in his environment.

One of these methods is called the *dilemma lesson*. It is built around a central character, circumstances and issues. To be workable, the dilemma story must have:

1. a central character
2. facing a problematic situation
3. who must make a choice
4. among a variety of alternatives
5. that involve a moral decision

Ideally, the story must also be short, provide background data and involve three or more decisions. It should also describe reasons for acting in a number of alternative ways and be open-ended. Remember there should never be a totally correct or wrong response. Pose the question, "What should (the central character) do?"

A dilemma lesson is merely an artificial device to get students to articulate and reflect on (and thus develop) the reasoning required in making ethical decisions. Instructors can use dilemma lessons to stimulate the development of the students reasoning and their sensitivity to hunting and wildlife issues.

The actual classroom method is really very simple because the students do all the work. To begin, distribute copies of the dilemma to each student. Allow them time to read and digest the story, and consider what the central character should do.

Then pose the question, "What should he or she do?" Hopefully, you will get a nearly perfect division among the student responses. If not, you should be prepared to accentuate the conflict or issues. This can be done through the use of alternative dilemmas, twists to the basic dilemma that do not alter the basic elements of the initial story.

After a division is created in the class, you could proceed in a number of different ways. If there is time, let the students work in small discussion groups. Each group should be comprised of students who responded similarly to the initial question. Instruct the groups to examine the reasons for their choice. What is the best reason for X to do this (or not do this)? What obligation, if any, does X have to other hunters, the landowner, the wildlife? Which is most important? Why? What would others (parents, non-hunters, friends, etc.) think of this? Is it ever right or wrong to...? Why? These questions will help aid the students in exploring the reasoning behind their decisions.

Each group should have a recording secretary to keep notes. After an adequate discussion period, the groups could report back to the entire class. Allow other groups to ask questions, and involve as many students as possible. Avoid leading the students toward any single conclusion. Remember, there is no right or wrong answer!

With similar groups or limited time, you may wish to examine their choices in an open discussion involving the entire class. Ask individuals their reasons for making a particular choice. Allow other students to dispute, but be cautious of one or two students attempting to dominate the discussion. The most important key to this technique is total student involvement. Encourage each and every student to participate.

Following are several dilemma examples.

Deer Hunting

John Kerber was an avid bowhunter and considered himself a true sportsman. He had scouted a particular area for several years in hopes of one day getting the opportunity at a well-known trophy buck. On the final day of the season, he finally got an excellent shot at the big ten-point buck.

The deer had stumbled but then regained its balance and quickly disappeared in flight. John was positive that the deer was wounded seriously, judging from the blood signs. After unsuccessfully searching for his arrow, John decided to wait awhile longer and then began tracking.

After following the blood trail until nearly dark, John came upon a familiar fence - posted! The fence was familiar to John because he knew the owner, Mr. Hendricks. They had children who attended school together, had met socially, and worked on several service club and community projects together. John had talked to Mr. Hendricks many times about hunting in an effort to change his opinion of the sport and hunters. Even so, Mr. Hendricks was still violently opposed to hunting and had all hunters on his property arrested for trespassing.

John knew that Mr. Hendricks would never allow him on his property. He was also positive that his trophy deer was dying or already dead, and probably within a few yards of the property line. In addition, John was acquainted with the law against wanton waste and believed in the sportsmen's code of ethics against the waste or needless suffering of game.

What should John do?

Law Violation

It was five days after the end of the deer hunting season and Bill was gathering firewood in his wagon from a five acre wood lot on his farm. While putting some logs in his wagon, he heard a rifle shot which sounded fairly close to him. He did not pay too much attention since the neighbor boy did some target shooting about once every two weeks. However, as Bill drove his tractor and wagon from his lot, he noticed his brother-in-law's pick-up truck at the far edge of the farm. Bob was an avid hunter who thoroughly enjoyed deer hunting. After parking the tractor and wagon in the driveway, Bill walked back to his brother-in-law's truck and found Bob dragging a field dressed doe out of the woods. Bob commented that he needed some meat for the table since he had been off work for over a year and his last welfare check had arrived about five weeks ago. When Bill returned home, he found the local conservation officer in the drive inquiring about purchasing some firewood.

What should Bill do?

Bag Limit

Like any 15-year-old boy with a brand new .22 rifle, Bill was eager to go squirrel hunting. Bill had been taught all of the safety rules in handling a rifle. In fact he was a graduate of a recent Hunter Education class. Also, he was very much aware of the hunting laws and regulations. Bill's father was the county's local conservation officer, and he had spent a great deal of time with Bill, teaching him all about the outdoors and the importance of hunter ethics.

On the first day of the squirrel season, Bill and two of his best friends went hunting in a nearby woods. One of Bill's hunting friends was the son of the county judge and the other friend was the son of the high school basketball coach. Upon arrival at the woods in which they were going to hunt, the three boys agreed to split up and then meet in about three hours. When the three boys got back together, Bill found out that both of his friends had killed over their limit of squirrels. Bill had killed only three squirrels. That afternoon at Bill's home, his father asked how many squirrels his friends had killed.

What should Bill do?

Posted Land

Bill and his brother-in-law, George, had been gun hunting for deer on private property in Perry County for several days. The landowner had given them permission to hunt on his 500-acre farm, but warned them that his neighbor did not allow hunting on an adjacent 350-acre farm. This was posted because the farmer who owned this land had a large herd of registered Angus cattle.

On several occasions Bill and George had spotted a large ten point buck on the posted land. During the last day of their hunt, Bill and George decided to separate while hunting, and they agreed to meet back at the edge of a soybean field before walking back to their parked truck. When the two men met, George informed Bill that he had spotted the ten point buck along the edge of a corn field on the posted land. He crossed over the fence onto the posted property, and after startling the trophy buck, proceeded to shoot five times at the running animal. Upon checking to see if he had hit the deer, George found that he had accidentally killed a registered Angus bull. George told Bill not to tell the farmer that he had shot the neighbor's prize bull. However, when they arrived at the parked truck, the farmer who owned the prize bull met them and asked them if they saw anyone on his farm who may have shot the bull.

What should Bill do?

Pollution

Bill was employed by a large canning company in his community. As a waste control engineer with this company, he was responsible for meeting all local, state and federal regulations concerning waste material produced in the process of canning fruits and vegetables.

Being an avid fisherman, Bill enjoyed wading Little Purple River and catching small mouth bass, blue gill, crappie, and sunfish on ultra light tackle. Little Purple River had a reputation as being one of the best stocked small streams in the state.

In the past, the canning company had emptied some of its liquid waste into Little Purple River, but the materials had met all government regulations. Recently, a new processing procedure for tomatoes would produce waste material which would not meet government regulations, but Bill had been ordered by his boss to go ahead and slowly dump this material into Little Purple River. His boss felt the small fine imposed on the company would be smaller than the cost to remove the waste by truck or develop a procedure to handle the waste in the plant. Bill knew also that this material would kill the fish in the stream.

While fishing in Little Purple River with his best friend, George, the county prosecutor, they noticed several dead fish in the stream. George asked Bill if he believed that his company was polluting the stream and causing the small fish kill.

What should Bill do?

Gun Safety

Bill was 17 years old, and he had been raised around firearms all of his life. His dad was very adamant that all of the gun safety rules be adhered to in hunting. In fact, Bill was an assistant instructor in the Hunter Education class conducted by his father.

Jim, the varsity basketball coach, was a hunting friend of Bill's. Bill just happened to be the star player on the basketball team with aspirations of getting a basketball scholarship to a state college. Unfortunately, the coach was not always as safety conscious as he should be. While rabbit hunting on a neighbor's farm, Jim had gotten careless in pointing the muzzle of his shotgun at Bill. In fact, Bill threatened to leave if he pointed the gun at him again. As Bill and Jim started walking abreast down a fence row, Bill looked in Jim's direction and saw the muzzle of Jim's gun pointing at him.

What should Bill do?

[redacted]

G

Samples of Ethics Codes

Angling Ethics

1. Keep Only the Fish Needed
2. Do Not Pollute—Properly Dispose of Trash
3. Sharpen Angling and Boating Skills
4. Observe Angling and Boating Safety Regulations
5. Respect Other Anglers' Rights
6. Respect Property Owners' Rights
7. Pass on Knowledge and Angling Skills
8. Support Local Conservation Efforts
9. Never Stock Fish or Plants Into Public Water
10. Promote the Sport of Angling

—Future 21

1. I will always obtain permission before I fish in someone else's pond.
2. When I fish with or near others, I will not crowd their spot.
3. I will dispose of litter properly, including not leaving behind monofilament line.
4. I will be careful when casting, so my hooks don't become dangerous to myself and others.
5. I will respect my catch, which includes releasing it carefully and gently if I do not plan to keep what I catch.
6. I will not take more fish than I can use.
7. I will abide by all regulations for size, limit and seasons.

—Missouri Department of Conservation

The Ethical Angler:

1. Supports conservation efforts.
2. Practices catch and release.
3. Does not pollute; properly recycles and disposes of trash.
4. Practices safe angling and boating.
5. Obeys fishing and boating regulations.
6. Respects other anglers' rights.
7. Respects property owners' rights.
8. Shares fishing knowledge and skills.
9. Does not release live bait into waters.
10. Promotes ethical sport fishing.

—Pathway to Fishing

Good Anglers:

1. Help protect the outdoors. They don't litter—that includes not throwing gum wrappers or orange peels on the ground and picking up all leftover bait, fish remains and other trash.
2. Respect other people's privacy and territory. They fish quietly so they don't frighten fish or disturb people. And they don't crowd someone out of a fishing spot.
3. Always practice safe fishing. They are careful when casting and pick up all fish hooks. If they get a fish hook caught in their skin, they get help taking it out.
4. Buy and carry fishing permits, if they are 16 years old or older.
5. Know the size and number of fish they can legally keep. Limits provide more chances for more people to catch fish.
6. Release fish right away if they don't plan to eat them.

—Wisconsin Department of Natural Resources

The Ethical Angler...

- Respects another angler's rights
- Respects the rights of others who use the resource
- Respects the rights of property owners
- Keeps only the fish he/she wants
- Never wastes fish
- Releases unwanted fish carefully and unharmed
- Never litters or pollutes the waters
- Knows and follows angling and boating regulations
- Continually seeks new knowledge and skill
- Shares his/her knowledge with others
- Doesn't release live bait or non-native fish into waters
- Promotes the sport of fishing

—AFTMA Sport Fishing and Aquatic Resources Handbook

Hunting Ethics

1. I will consider myself an invited guest of the landowner, seeking his permission, and so conducting myself that I may be welcome in the future.
2. I will obey the rules of safe gun handling and will courteously but firmly insist that others who hunt with me do the same.
3. I will obey all game laws and regulations, and will insist that my companions do likewise.
4. I will do my best to acquire those marksmanship and hunting skills which assure clean, sportsmanlike kills.
5. I will support conservation efforts which can assure good hunting for future generations in America.
6. I will pass along to younger hunters the attitudes and skills essential to a true outdoor sportsman.

— *National Rifle Association*

Birding Ethics

1. I will strive not to disturb birds or their nests by approaching too closely.
2. I will attempt to remain quiet and inconspicuous so as not to be too disruptive.
3. I will not trample habitat.
4. I will keep birding groups small so as not to have too great an impact on birds and other wildlife resources.
5. I will avoid the use of bird calls, records, or tapes to attract rare or nesting birds into view.
6. I will not drive rare or nesting birds from cover.
7. I will make an effort to gain a more thorough knowledge and appreciation of birds and their habitats beyond mere identification.
8. I will gain permission before entering property and will respect the landowner's rights.

— *Missouri Department of Conservation*

We, the membership of the American Birding Association, believe that all birders have an obligation at all times to protect wildlife, the natural environment, and the rights of others. We therefore pledge ourselves to provide leadership in meeting this obligation by adhering to the following general guidelines of good birding behavior,

I. Birders must always act in ways that do not endanger the welfare of birds or other wildlife.

In keeping with this principle, we will

- Observe and photograph birds without knowingly disturbing them in any significant way.
- Avoid chasing or repeatedly flushing birds.
- Only sparingly use recordings and similar methods of attracting birds and not use these methods in heavily birded areas.
- Keep an appropriate distance from nests and nesting colonies so as not to disturb them or expose them to danger.
- Refrain from handling birds or eggs unless engaged in recognized research activities.

II. Birders must always act in ways that do not harm the natural environment.

In keeping with this principle, we will

- Stay on existing roads, trails and pathways whenever possible to avoid trampling or otherwise disturbing fragile habitat.
- Leave all habitat as we found it.

III. Birders must always respect the rights of others.

In keeping with this principle, we will

- Respect the privacy and property of others by observing "No Trespassing" signs and by asking permission to enter private or posted lands.
- Observe all laws and the rules and regulations which govern public use of birding areas.

  - Practice common courtesy in our contacts with others. For example, we will limit our requests for information, and we will make them at reasonable hours of the day.
  - Always behave in a manner that will enhance the image of the birding community in the eyes of the public.

IV. Birders in groups should assume special responsibilities.

As group members, we will

  - Take special care to alleviate the problems and disturbances that are multiplied when more people are present.
  - Act in consideration of the group's interest, as well as our own.
  - Support by our actions the responsibility of the group leader(s) for the conduct of the group.

As group leaders, we will

  - Assume responsibility for the conduct of the group.
  - Learn and inform the group of any special rules, regulations, or conduct applicable to the area or habitat being visited.
  - Limit groups to a size that does not threaten the environment or the peace and tranquillity of others.
  - Teach others birding ethics by our words and example.

—American Birding Association

Trapping Ethics

Ethical trappers:

1. Know and obey trapping laws and assist in their enforcement by reporting violations.
2. Improve their knowledge of furbearers, furbearer ecology and management, and methods of trapping and fur handling.
3. Respect landowners' rights and make every attempt to obtain permission before trapping on private lands.
4. Are aware of other people using the outdoors and avoid interference with their activities.
5. Are aware of free-ranging domestic animals and avoid trapping where there is a high risk of catching them.
6. Know and use selective and humane trapping sets with appropriate trap types and sizes.
7. Do not set more traps than they can effectively handle.
8. Cover all leghold traps set on land.
9. Always use body-gripping traps, guarded leg-hold traps or drowning sets when trapping muskrats.
10. Use body-gripping traps or drowning sets with sliding locks for all beaver and otter sets.
11. Anchor traps securely enough to hold the largest potential catch.
12. Check all traps daily and as early in the day as possible.
13. Dispose of animal carcasses properly to avoid offending other people.
14. Support trapping, trapper training, and furbearer management and research.
15. Report diseased animals.
16. Make an effort to trap any areas where furbearer populations are overabundant or are creating a nuisance.
17. Know and use proper releasing and killing methods.

—adapted from New York State Trapping Furbearers Student Manual

Caving Ethics

1. Do not mark or deface caves in any way.
2. Carry out all refuse—leave nothing to mar the cave's beauty.
3. Take nothing but pictures, leave nothing but footprints and kill nothing but time.
4. No person should be asked to do something beyond his physical limitations.
5. Use retrievable markers in a large cave—a tongue depressor or an ice cream stick with red Scotchlite tape will clearly mark your route.
6. Leave all gates as found when approaching and leaving a cave.
7. Follow good conservation practices in and around the cave.

—National Speleological Society

Developing a Code of Ethics Worksheet

Using the following categories list as many responsibilities or ethical obligations you can think of with respect to each. Ask yourself what kinds of duties you might owe, or what guideline(s) you might use in each situation.

- fellow anglers encountered while fishing

- non-anglers using the same aquatic resource

- landowners

- the local community

- administrative/regulatory agencies

- the sport/tradition of fishing

- individual fish and other living aquatic animals

- the aquatic ecosystem

Appendix I

Members of Outdoor Ethics Education Task Force

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Organizations of Note to Outdoor Ethics Educators

Institute for Global Ethics
PO Box 563
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Center for the Advancement of Ethics and Character
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605 Commonwealth Ave.
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International Society for Environmental Ethics
c/o Laura Westra
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Human Dimensions in Wildlife Study Group
c/o David Thorne
Missouri Dept. of Conservation
PO Box 180
Jefferson City, MO 65109

Leave No Trace
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Center for Respect of Life and Environment
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North American Association for Environmental Education
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American Birding Association
PO Box 6599
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Appendix K

Original Grant Proposal: "Teaching Angler Ethics-How To Techniques and Evaluative Tools

I. Title

Teaching Angler Ethics-How To Techniques and Evaluative Tools

II. Background and Purpose

Survey

The National Wildlife Federation conducted an angler ethics survey of all aquatic resource education coordinators (see Attachment A) in April 1992. At the time of writing this proposal, 31 states had responded. All states that responded to the question "Do you think angler ethics is a matter of concern?" believed that it is a matter of concern and all but one state believed that ethics can be taught. The majority of the states integrate ethics into their entire angler education program rather than teach it as a separate subject. They use a variety of methods to teach ethics. Examples include lectures, readings, discussions, role plays and activities. Most train their instructors to teach ethics. Only 10 states answered that they thought they were being effective. When asked if they would use a teaching unit, activities or materials specifically addressing angler ethics in their program, 15 indicated "yes"; three said "no"; 11 said "maybe"; and two gave no response.

Those expressing interest in materials said they would use them as handouts for instructors and also use them in fishing clinics and with sportsmen's groups and conservation camps. Several states indicated an interest in teaching materials for instructors on the subject. They expressed a desire for hands-on, interactive materials.

State Programs

Many states have aquatic education programs in place and are using a variety of materials that range from national programs like Aquatic Project WILD and AFTMA's manuals to their own state materials. Each state has resources and issues that are unique to that state.

Therefore, it is not the intent of this project proposal to create new materials for the states. Rather, the objective is to help states use the materials they have and effectively teach angler ethics as part of their existing or to-be-developed angler education programs.

III. Scope of Work

This project will research the most effective means of teaching ethics. This will be done through library research, talking with state aquatic education coordinators who are using techniques they consider successful, consulting with experts on the subject and testing various methods of teaching ethics. The final result will be recommended techniques for teaching ethics in state aquatic resource education programs. Evaluating effectiveness is difficult when teaching ethics. Yet many state coordinators could gain additional support for their programs if they could show their directors that they are indeed making a difference with their program. Therefore, evaluation tools will also be investigated and tested and suggestions made as part of the project.

The final project may take several forms depending on what is determined to be most effective by the findings of the research. It will most likely include a training manual and training aids. All materials will be adaptable for the states and their individual resource/behavior concerns.

A. Description of Work/Objectives

1. The Grantee will set up a meeting of an advisory committee, consisting of federal aid coordinators, state aquatic education staff, national resource people, academic experts and others who can provide valuable input at the beginning of project. (Committee can later review materials.) By May 31, 1993.

2. The Grantee will conduct a literature review on the subjects of environmental ethics, teaching of values and related topics and on methods for evaluating ethics training, By July 15, 1993.

3. The Grantee will interview state coordinators and teachers or others who have indicated they are using techniques in teaching ethics that they consider to be successful. By July 31, 1993.

4. The Grantee will compile results of literature review and interviews and set up situations for pre- and post-testing for recommended techniques. By August 31, 1993.

5. The Grantee will conduct tests of teaching methods and evaluate findings from the pre- and post-test results. By October 31, 1993. (Note: To be most effective, long-term testing will be important with a follow-up of pilot study group(s) as much as five years later.)

6. The Grantee will compile findings and assess the best method of presenting them to the states for their use (ex: training manual, video, teaching aids). By December 31, 1993.

7. The Grantee will complete all materials for the project and set up a training schedule. By March 1, 1994. (Note: Training on how to best use the materials may best be accomplished through federal aid regional meetings and the dates for these may not occur during the current project year; in which case, the project would need to be extended to complete training.)

B. Time

Project will take one year to complete. Quarterly reports will be issued to measure milestones and show accomplishment of the objectives. (Note: Not all training may be able to be scheduled and completed in the first year of the project. If a training video is needed, it may or may not be able to be completed during the first year.)

IV. Results/Benefits to States

Of the states responding to the survey, six indicated that teaching angler ethics in their program was most important; 20 said it was very important; one said it was somewhat important; none said it was not important; four gave no response. From the survey responses, it was apparent that the aquatic education coordinators believe that angler ethics is a matter of concern and want to address it in their programs.

This project will produce materials that can be distributed inexpensively to the states and which they can reproduce for their individual purposes. They should not have to budget for or buy expensive manuals or training aids. The materials should be easily adaptable to their programs and will help them evaluate the effectiveness of their efforts.

If angler education programs are successful in teaching angler ethics, the bottom line will be improved fishing, fisheries resources, landowner relations and angler image, which will benefit all state wildlife programs.

V. Resumes (See Attachment B.)

Coordinator for the project will be Cheryl K. Riley, Director of Outdoor Ethics for the National Wildlife Federation. Consultant for the project will be Bruce E. Matthews, Executive Coordinator of the Coalition for Education in the Outdoors, faculty member of the Department of Recreation and Leisure Studies, State University of New York, Cortland, and state coordinator for New York's Sportfishing and Aquatic Resources Education Program.

Appendix L

Kohlberg's Stages of Moral Development: Pros and Cons

Kohlberg's theory of moral development is considered in more detail here because of the interest it has generated among outdoor ethics educators. When Bob Jackson searched the literature in the mid-eighties to help hunter educators find and develop more effective ethics education techniques, he found the moral dilemma discussion approach. Based on Kohlberg's work, the dilemma discussion approach seemed to offer a positive alternative to methods Jackson knew were not effective.

Kohlberg is not without his critics, however, and the moral dilemma discussion method has its limitations, as discussed in Chapter One.

In 1975, Kohlberg co-authored an article with Moshe Blatt that described six stages of moral development:

Preconventional morality (ego centered)

Stage One	Fear of punishment or getting caught.
Stage Two	Avoidance of punishment still motivates, but risk may be taken if personal benefit outweighs risk.

Conventional morality

Stage Three	Beginnings of social conscience. Actions based on how others view them.
Stage Four	Extends moral allegiance to society. Actions based on upholding social order.

Post-conventional morality: commitment to universal, proposed ethic

Stage Five	Acceptance of individual responsibility for the moral consequences of behavior. Individual chooses action because he/she understands moral reasons underlying choice.
Stage Six	Action motivated by being true to oneself. Personal autonomy. (Blatt & Kohlberg 1975)

Cons About Kohlberg

Kohlberg's Stages of Moral Development are frequently used as a model in understanding the process by which humans develop morally. Dr. Robert M. Jackson used Kohlberg's theory as a basis for adapting a moral dilemma discussion approach for hunter ethics education (See Appendix F). They should be considered only one model, however, and readers should be aware that Kohlberg's theory is challenged for being human-centered and biased toward males, and for its assumption that all people reason in a linear way.

For example, Carol Gilligan provides one of the most serious challenges to Kohlberg's theory in her book, *In a Different Voice.* She describes a study she conducted that demonstrated significant differences in the way that boys and girls evaluate moral dilemmas. If one follows Kohlberg's model, one might assume that the girls are not as morally developed as the boys. Gilligan demonstrates that girls are *differently* developed, and thus cannot be judged according to Kohlberg's scale (Gilligan 1982, 1987). This has additional implications for describing moral development in multicultural contexts.

As our outdoor and environmental ethics shift away from the strictly utilitarian view and toward a more holistic way of dealing with the world, we can find even more problems with Kohlberg's emphasis on humans. As Beringer points out, Kohlberg's theory was developed to explain human interactions and was not intended to cover non-human relationships (1990). This may further limit the application of Kohlberg's theories in the contexts of outdoor and environmental ethics.

Evaluation Example: NatureLink®

The National Wildlife Federation's NatureLink program is built on the concept of mentoring. Mentors are volunteers selected for their knowledge of particular outdoor skills and commitment to care of natural resources. Mentors commit their time, not just for the NatureLink family weekend, but for a year following.

Families attend a weekend in an outdoor setting and learn skills such as fishing, camping and hiking. Each family is assigned a mentor as soon as they arrive at the NatureLink site. At the end of the weekend, families are asked to make a resource pledge. Mentors work with their families to identify a simple stewardship goal they can take home and put into practice. By remaining in contact after the weekend, mentors serve as reminders and can provide additional encouragement and assistance to help families complete their pledge and stay involved in outdoor activities.

How can we evaluate whether NatureLink is successful? To find out, the National Wildlife Federation has contracted with the Human Dimensions Research Unit (HDRU) of Cornell University's Department of Natural Resources to conduct the evaluation. The primary focus is on this question: Does participation in the NatureLink program contribute to attitude and behavior change indicative of a greater commitment to environmental stewardship?

To research this question HDRU plans to use a pre-test/post-test design using a treatment group (NatureLink families) and a control group (families that did not participate in NatureLink) in a sample of states where the program is currently conducted. Key characteristics, attitudes, and behaviors will be measured by mail questionnaire for NatureLink and control group families before a NatureLink weekend. The same families will be surveyed again twelve months later to measure change in stewardship-related attitudes and values. In addition, information will be collected from program hosts and mentors to document program experiences and participant-mentor interactions.

Of particular interest to ethics educators is HDRU's plan to ask parents to comment on their child's attitudes and behavior in the questionnaire, as well as include sections that the child will complete with the parent's assistance.

William F. Siemer of Cornell University's Department of Natural Resources Human Dimensions Research Unit contributed to the writing of this section.

Appendix N

Evaluation Example: New York's Sportfishing and Aquatic Resources Education Program

Designing an Evaluation: New York's Angling Ethics Education Program

Now let's see how New York's Sportfishing and Aquatic Resources Education Program (SAREP) is developing an evaluation for the angling ethics component of the program. SAREP uses a small group, community club, or mentor-apprentice approach to teach young anglers how to catch fish in an ethical manner. It emphasizes the importance of sustained personal support over time, training instructors to guide youngsters as they develop and refine personal and group codes governing their behavior while fishing.

The Goals and Objectives

The overall ethics goal is to develop a new generation of New York anglers that knows and acts on the belief that it feels good to fish "right"—to fish in an ethical and responsible manner. To achieve this goal, SAREP created objectives for three groups—each individual youth, the group, and the instructors. The objectives include:

A. Youth

Through participating in a SAREP club for a minimum of one year, each youngster will be able to:

1. Identify in writing at least one personal ethical obligation or responsibility with respect to each of the following:
   - fellow anglers encountered while fishing
   - non-anglers using the same aquatic resource
   - landowners
   - the local community
   - administrative/regulatory agencies
   - the sport/tradition of fishing
   - individual fish and other living aquatic animals
   - the aquatic ecosystem
2. State a set of ethical values which includes the natural world and the sport of fishing in relation to him or herself.
3. When given an ethical dilemma to discuss, verbalize and use the ethical values stated in objective #2 in the decision-making process.
4. Demonstrate significant changes (.05 level) in attitudes toward behaving ethically in the environment and while fishing in tests given prior to the beginning of the program and at three-month intervals throughout the year.
5. Demonstrate an increase in positive fishing behaviors, motivated by ethical considerations, as observed by the SAREP Instructor.

B. Group

After one year in SAREP, a club will:

1. Develop a written code of ethics, through group process and consensus, that includes a statement of responsibility with respect to each of the following:
   - fellow club members and the club
   - fellow anglers encountered while fishing
   - non-anglers using the aquatic resource
   - landowners
   - local community
   - administrative/regulatory agencies
   - the sport/tradition of fishing
   - individual fish and other living aquatic animals
   - the aquatic ecosystem

2. Reach consensus on a set of ethical priorities which includes the natural world and the sport of fishing in relation to him or herself.
3. Verbalize and use the ethical priorities stated in objective #2 in the decision-making process when given an ethical dilemma to discuss.

C. Instructors

Through participation in a weekend SAREP Instructor Certification Training, each certified instructor will:

1. Demonstrate basic expertise in the following ethics education techniques:
    - leading a dilemma discussion
    - guiding a group of youngsters as they develop a group code of ethics
    - role-modeling
    - role-playing and simulation exercises
    - mentoring
    - facilitating group process and consensus-building
    - peer teaching and counseling
    - promoting group identity and ownership of group norms, mutual respect among learners and leaders, and community-building as contextual for good ethics education
2. Demonstrate through discussion an understanding of what to avoid in the ethics education process, including:
    - authoritarian teacher/passive learner approaches (lecturing)
    - excessive moralizing
    - imposing externally derived codes

Design the Evaluation

When designing their evaluation, SAREP used the Martin process.

1. *Determine the evaluation audience.*
    - SAREP program administrators
    - New York State Department of Environmental Conservation (NYSDEC) administrators
    - USFWS Federal Aid staff
    - Other angler and outdoor ethics education programs
2. *Clearly state the purpose of the evaluation.*
    - Assist program leaders to improve their effectiveness in reaching ethics education goals and objectives.
    - Provide information to NYSDEC decision-makers documenting impacts of SAREP ethics education programs.
    - Assist the field in demonstrating and documenting effective outdoor ethics education techniques.
    - Advance knowledge in outdoor ethics education.
3. *Determine the best sources of data.*
    SAREP youth members and their parents and SAREP Instructors.
4. *Choose or create a design for the evaluation.*
    The initial design will use a combination of case study and quasi-experimental approaches.
5. *Identify resources.*
    The evaluation will cost approximately $20,000, in addition to program staff time. SAREP will use the experience of its director and the expertise of the Human Dimensions Research Unit of the Department of Natural Resources at Cornell University.
6. *Establish a time frame.*
    The entire evaluation will be accomplished during one year.

March 1	research design completed
April 30	instructors trained; data collected for instructor objectives #1-2
May 31	pre-testing of youth objectives #4-5 completed
Sept. 30	all data collected for youth objectives #1-3 and group objectives #1-2; post-tests completed for youth objectives #4-5
Oct. 31	instructor objective #2 evaluated again
Dec. 31	interpretation of data, summary, and report completed

7. *Choose data-gathering techniques.*

Ten SAREP clubs, each consisting of four to ten youth will volunteer for evaluation. This will limit the ability to generalize the results to all SAREP clubs, but it will give good data about what happens within each group. SAREP also can compare results among groups, which will strengthen the likelihood of replicating the results elsewhere.

To evaluate youth objectives:

1–2 Written test. Questions will be designed and pilot tested ahead of time to ensure they accurately measure the intended cognitive development.

3 Verbal interview technique

4 Pre- and post-testing at three-month intervals using the Solomon 4-group, if the number of youth participants allows. This enables better control of intervening variables and increases validity and reliability in the results.

5 Pre- and post-tests, anecdotal records of SAREP Instructors, participant observations by trained observers not known by club members, unobtrusive observations of actions such as littering, and individual and focus group interviews to determine motivations for ethics-related behaviors noted or observed.

To evaluate group objectives:

1 Anecdotal records submitted by instructors, which should include the group's ethics code agreed upon through a consensus process.

2-3 Focus-group interview.

To evaluate instructor objectives:

1 Survey of instructors at the end of their training; follow-up survey at the end of the program to assess the effectiveness of the instructor training.

1–2 Anecdotal process—collecting and reviewing lesson plans that instructors used to teach ethics.

Five Environmental Ethics Approaches Illustrated

Environmental ethics asks the degree to which we value nature, and why we do so, as we make choices about how we live within earth's ecosystem. There are five approaches to answering the question "Why do we have a duty to or with respect to nature or objects therein?" These five approaches are illustrated below:

Anthropocentrism (human-centered)

We have a duty to nature because it nurtures and sustains humankind, and can be used for humankind's benefit. Objects in nature are valued primarily for their benefit to humans.

Examples: *Rain forests should not be destroyed because the cure for cancer is likely to be found there.*

Rain forests are the homes of indigenous peoples, and we have no right to destroy the homes and cultures of other humans.

The beauty of the natural vista from this point should be preserved for the enjoyment of future generations.

Logging practices resulting in stream degradation are destroying steelhead runs in my favorite fishing stream; therefore they should be stopped.

Hunting whitetail deer or trapping beaver is morally justifiable since these creatures are used for the benefit of humankind, and managed harvest is good for the resource. Their pursuit offers enjoyment and their consumption offers sustenance.

Wolves should be restored to Yellowstone because somehow just knowing they are there makes me feel good. It just feels right.

Wolves should not be restored to Yellowstone because they will inevitably cause conflict with humans.

All of the above examples suggest acting with respect to the environment for human-centered reasons. The actions suggest a utilitarian valuing of the natural world, and the rationale offered is human-centered.

Theocentrism (God-centered)

We have a duty with respect to nature because it was created by God, who also created us to be caretakers. Our duty to God requires us to protect God's creation. Abuse of the environment is disrespectful of God and God's will. Because we owe the highest duty to God, we must always act as stewards of God's creation and use it wisely.

Examples: *Rain forests should not be destroyed because God created them to glorify Her creation, and entrusted their care to humans.*

The beauty of the natural vista from this point should be preserved for the glorification of God, who created it.

The miracle of steelhead and salmon returning to spawn in their natal streams is one more proof of the greatness of God and the mysteries of His creation. Therefore the protection of the stream is God's will, and humankind's responsibility as instruments of His will.

The managed hunting of deer and trapping of beaver are uses of God's creatures according to His plan.

Wolves are God's creatures, and restoring them to Yellowstone renews humankind's commitment to the stewardship of God's creation.

Wolves are God's creatures. When She wants them back in Yellowstone, She'll put them there herself!

Each example illustrates a God-centered rationale for action.

Sentientism (awareness of pain)

The degree of responsibility or duty we have toward objects in nature is in direct proportion to that object's awareness or consciousness of pain and pleasure. The difficulty of knowing the degree of pain or pleasure experienced by animals or plants makes this approach less objective; usually it means the more closely an organism resembles humankind or approaches humankind on the evolutionary ladder, the more deserving it is of ethical consideration, or even rights.

Examples: *Rain forests should not be destroyed because they provide homes for sentient creatures. Humans have no right to cause pain to sentient beings.*

The overheated and turbid water from logging practices causes pain and suffering to steelhead smolts, and the returning adults experience anguish at being unable to find suitable spawning gravel and water depths to spawn. Therefore the logging must stop.

Hunting deer and trapping beaver causes these animals pain and suffering; therefore it is wrong.

Hunting deer and trapping beaver, when the death is swift and humane, causes less pain and suffering than starvation or disease, and thereby is morally justifiable when populations reach unsustainable levels.

Wolves should be returned to Yellowstone if it can be done without causing them any undue pain or hardship. After all, they were there before we were.

In each example, the overarching principle or determining factor in justifying or opposing an action is the degree of suffering it causes. The less pain experienced, the more right the course of action.

Biocentrism (life-centered)

All living things, regardless of their level of consciousness, deserve moral consideration, or even rights. Typically a biocentric perspective is concerned with *individual* living things.

Examples: *Rain forests should not be destroyed because they are the homes of individual living organisms. Their destruction is morally unjustifiable.*

The earth is a living organism. Alteration of it impacts life and is not defensible.

Logging practices resulting in stream degradation are destroying fish and other forms of aquatic life. Therefore logging should be stopped.

Hunting whitetail deer or trapping beaver is morally justifiable only when done for subsistence purposes.

Hunting and trapping takes life and is not right.

Wolves should be restored to Yellowstone because they deserve a place to live just as much as we do.

The driving rationale behind each of these examples is the impact on the life of that organism. A biocentric approach strives to "walk softly," to "live simply so that others may simply live." Plants and animals are valued simply for the life they possess, the same life that flows through all living things.

Holism (ecosystem-centered)

Taking a different tack, the holistic approach places the greatest value on maintaining the ecosystem—the concept of land as Leopold viewed it—"preserving the integrity, stability and beauty of the biotic community." The needs of individuals of any species are subordinate to the requirements of the system itself.

Examples: *Rain forests should not be destroyed because they play a critical role in maintaining the global ecosystem, acting as the "lungs" of the earth.*

The beauty of the natural vista from this point should be preserved simply because it is beautiful.

Logging practices resulting in stream degradation are destroying steelhead runs, therefore they should be stopped. Fishing should be stopped, too, until the steelhead population again reaches a fishable size.

Hunting whitetail deer or trapping beaver is morally justifiable as long as the removal of individuals from these populations does not impact its ability to sustain itself.

Hunting or trapping for the purpose of keeping the system in balance is a moral imperative, particularly in the absence of nonhuman predators.

Wolves should be restored to Yellowstone because they were an original element of that ecosystem which humans removed.

With a holistic rationale, primary consideration is given to maintaining the integrity of the ecosystem. The holistic approach demands an understanding of the requirements of the ecosystem. While it does not preclude "intelligent tinkering," it carries a moral imperative to not alter or impair the system and to live within the means of the system.

Outdoor Ethics Education Applied: Two Hypothetical Examples

Let's assume you have a particular problem you believe could be solved through ethics education. Given what we have learned in this study, are there strategies that may be used that might alleviate the problem?

Example A: Littering

Your state has a littering problem, at least some of which is caused by anglers. Develop an outdoor ethics education program designed to reduce litter left by anglers.

Your goal is a permanent reduction in the amount of litter left by anglers. Steps to take might include:

1. Contact angler groups in local problem areas. Ask them if they would be willing to assist you in a one-day clean-up of area problem sites.
2. Measure and weigh collected litter. Sort and catalog litter from anglers. Keep record for future comparison.
3. Meet with angler and community groups to discuss the problem. Act as a facilitator, not an authority. Your objective is to move the group to accept ownership of the problem. Brainstorm ways to reduce or eliminate angler litter with the groups. Identify strategies and facilitate group as they reach consensus on goals, and what to do to meet them.
4. Assist with implementation of group strategies.
5. After a suitable period evaluate progress by measuring litter left since the first clean-up. Repeat as necessary, notifying groups of results.
6. Recognize and reward efforts of volunteers. Then recognize and reward them again.
7. If needed, work with the groups to maintain a long-term effort.

Example B: Conflicting Values

A new immigrant ethnic group has formed communities in a number of areas in your state. There is a strong emphasis on fishing in this culture, focusing primarily on subsistence. Though anglers from this group target only panfish which have no legal length regulations, they keep even the smallest fish. Complaints by mainstream anglers are getting frequent, and the situation is turning ugly as the conflict escalates and takes on racial overtones. Can you deal with this from an outdoor ethics education perspective?

Your primary goal is to protect the resource. Although the panfish population does not appear to be impacted by the removal of large numbers of immature fish, you are concerned that this behavior may occur with other species as well. You are also concerned with reducing the conflicts among anglers.

Your strategy is twofold. First, you will attempt to work within the new ethnic community to educate them about the fishery and the ethics issues involved. Second, you will work with mainstream angling groups to acquaint them with the new community and their culture and to build bridges based on the shared fishing interest.

Strategies for working within the new community include:

1. Identify community leaders who may have an influence with the anglers. Meet with them to discuss the situation. Listen to their ideas—do not try to impose your own agenda. You may be mainly concerned with the resource and reducing conflict—their agenda may be entirely different. Learn what their agenda is first. Find out the resource issues and problems they have. Listen.
2. An alternative to number one if you are

uncomfortable with the situation or cannot speak the language would be to identify an individual who can communicate with and is trusted by the community. Have him/her carry out number one.

3. Arrange to go fishing with members of the new community. Learn how they fish. Share how you fish.
4. As you gain their trust, introduce the idea of understanding aquatic ecology, and the importance of sharing the resource. Draw parallels using examples from their culture. Suggest that they organize a meeting of anglers and angling leaders to learn more about aquatic ecology. Listen for their response—they may not want to have a meeting but may suggest another way to accomplish the same thing.
5. Listen and follow the lead of the community leaders. Adopt strategies based not on what you think should happen, but on what they suggest. Work to resolve their resource issues and problems while working to meet your goal.

Strategies for working within the mainstream angling community include:

1. Meet with mainstream angling groups and listen to their concerns. Ask them to be part of a long-term strategy to build resource advocacy on the part of *all* members of the community. Work with them to both listen to their issues and communicate yours. Keep the focus on the resource. Immediately deal with racist attitudes.
2. Do workshops with the mainstream angling community on aquatic ecology and resource management. Focus on all the alternatives, including the impacts of removing large numbers of small fish.
3. Invite ethnic community to share fishing techniques and experiences with mainstream angling groups in an effort to acquaint anglers with the fishing culture of the ethnic community.
4. Sponsor a community fishing fair. Encourage all members of the community to come to a neutral location to share fishing skills, techniques, equipment, stories. Keep the event non-competitive.
5. Set up opportunities to fish together in a multicultural context. Again, keep all events non-competitive.
6. Start youth fishing clubs that include both ethnic community and mainstream members. Develop a mentoring program for new anglers of all communities, including mentors from all communities.

If you are uncomfortable handling this type of situation, there are conflict resolution workshops that can help you learn skills for dealing with such conflicts. Remember that it will take time to resolve the issue. The ethnic anglers may change their habits and adopt mainstream values. Or, the issue may become a non-issue. The groups may just agree to disagree on this issue. As long as you are successful in bringing the communities together in a common commitment to doing what is best for the resource, you have succeeded.

About the National Wildlife Federation

The National Wildlife Federation is the largest private, non-profit conservation education organization in the United States. Founded in 1936 as a nationwide network of grassroots organizations, NWF still maintains a network of affiliates throughout the country that set conservation policies for its members.

Our mission...

The mission of the National Wildlife Federation is to **educate, inspire** and **assist** individuals and organizations of diverse cultures to conserve wildlife and other natural resources and to protect the Earth's environment in order to achieve a peaceful, equitable and sustainable future.

Our education programs...

Education is at the heart of NWF's mission, with programs including:

- NatureQuest®—an environmental education training program for leaders of youth programs and teachers.
- NatureLink®—a program that links urban and suburban families back to nature through a weekend in the outdoors and matches them with a mentor, who continues to stay involved with them to share outdoor experiences.
- NatureScope®—a science and nature activity series used as a curriculum supplement by more than 50,000 teachers, naturalists and outdoor educators.
- Wildlife Camp®—a nature-oriented camp for children ages 9-13 and a Teen Adventure Program for youth 14-17.
- Conservation Summits®—a week-long outdoor education and discovery program for families and educators.
- Wildlife Week Kits—more than 620,000 Wildlife Week Education Kits are distributed to educators each year. Each kit has teaching activities, a poster and NWF's conservation stamps.
- Conservation Directory—the most comprehensive resource for names and addresses of state, national and international conservation and environmental organizations.

Education materials — A keystroke away...

The National Wildlife Federation is developing the Animal Tracks® Computer Bulletin Board for Educators, to be available Fall of 1995. This valuable source of information will allow educators across the country to have access to education materials and current events of interest via their computers.

For more information...

For more information about National Wildlife Federation's conservation education programs, write Educational Outreach Department, National Wildlife Federation, 8925 Leesburg Pike, Vienna, VA 22184-0001, or call 703-790-4055.

Notes